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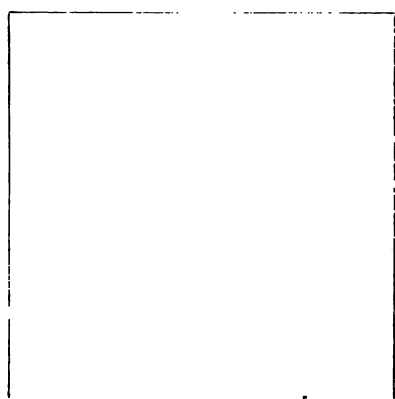


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Bulletin No. 240

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DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

BIBLIOGRAPHY AND INDEX
OF
NORTH AMERICAN GEOLOGY, PALEONTOLOGY,
PETROLOGY, AND MINERALOGY

FOR
THE YEAR 1903

BY
FRED BOUGHTON WEEKS



WASHINGTON

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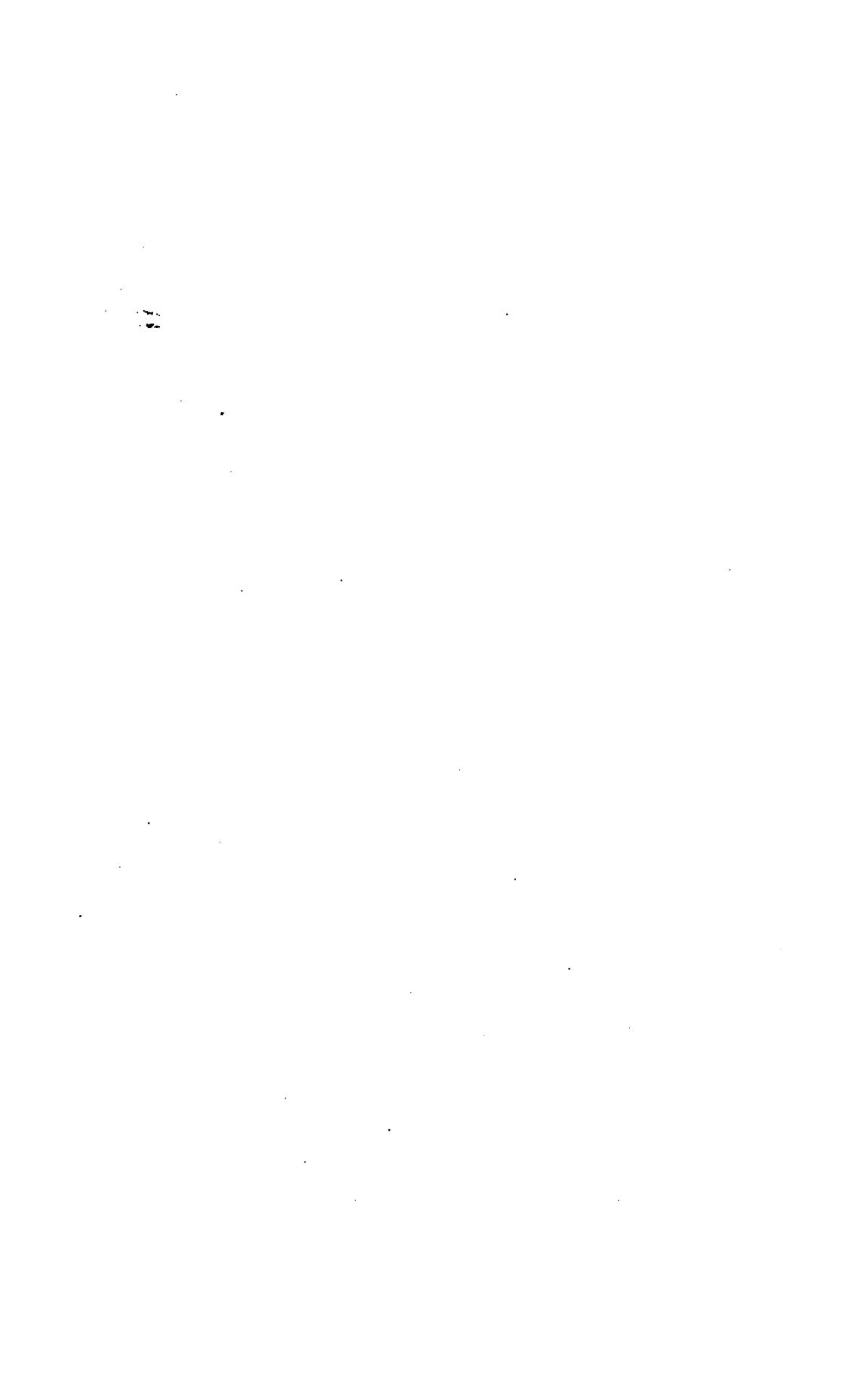
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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., June 7, 1904.

SIR: I have the honor to transmit herewith the manuscript of a bibliography and index of North American geology, paleontology, petrology, and mineralogy for the year 1903, and to request that it be published as a bulletin of the Survey.

Very respectfully,

F. B. WEEKS,
Librarian.

HON. CHARLES D. WALCOTT,
Director United States Geological Survey.

BIBLIOGRAPHY AND INDEX OF NORTH AMERICAN GEOLOGY, PALEONTOLOGY, PETROLOGY, AND MINERALOGY FOR THE YEAR 1903.

By FRED BOUGHTON WEEKS.

INTRODUCTION.

The arrangement of the material of the Bibliography and Index for 1903 is similar to that adopted for the preceding annual bibliographies, Bulletins Nos. 130, 135, 146, 149, 156, 162, 172 (combined in Bulletins 188 and 189), 203, and 221.

Bibliography.—The bibliography consists of full titles of separate papers, arranged alphabetically by authors' names, an abbreviated reference to the publication in which the paper is printed, and a brief description of the contents, each paper being numbered for index reference.

Index.—The subject headings, their subdivisions and arrangement, are shown in the classified key to the index, which immediately precedes the index. Reference is made in each entry by author's name and number of article in the bibliography.

The series of annual bibliographies has been prepared solely from publications received by the library of the United States Geological Survey. On January 1, 1903, the writer was placed in charge of the library of this organization, and an effort has since been made to procure the publications which were not noticed in the bibliographies of previous years, it being known that there were a considerable number of omissions of geological papers. Many of these are noted in this bulletin.

Mr. John M. Nickles has again assisted in the compilation of this work, and credit is due him for its careful preparation and completeness.

LIST OF PUBLICATIONS EXAMINED.

- Alabama Geological Survey: Bulletin no. 7, 1903. Montgomery, Ala.
- American Academy of Arts and Sciences: Proceedings, vol. 38, nos. 16-25; vol. 39, nos. 1-12, 1903. Boston, Mass.
- American Geographical Society: Bulletin, vol. 35, 1903. New York, N. Y.
- American Geologist, vols. 31 and 32, 1903. Minneapolis, Minn.
- American Institute of Mining Engineers: Transactions, vol. 33, 1903, and advance papers of 1903 meetings. New York, N. Y.
- American Journal of Science: 4th ser., vols. 15 and 16, 1903. New Haven, Conn.
- American Museum of Natural History: Bulletin, vol. 19, 1903; Memoirs, vol. 1, pt. 8, 1903; Journal, vol. 3 and supplements, 1903. New York, N. Y.
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- 6 — Stratigraphic relations of the Red Beds to the Carboniferous
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- 12 **Aiken** (P. B.). The mines of Santa Eulalia, Mexico.
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- 13 **Alden** (William C.). The stone industry in the vicinity of Chicago, Ill.
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See Fuller (M. L.) and Alden (W. C.), 424.
- 15 — **Fuller** (Myron L.) and. Gaines folio, Pennsylvania-New York.
See Fuller (M. L.) and Alden (W. C.), 423.
- 16 **Aldrich** (Truman H.). New species of Tertiary fossils from Alabama, Mississippi, and Florida.
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- 25 ——— Ordovician succession in eastern Ontario.
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- 27 ——— The first Eparchæan formation.
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- 28 ——— See Adams (F. D.), 2.
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- 30 **Anderson** (Tempest). Characteristics of recent volcanic eruptions.
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- 31 ——— Recent volcanic eruptions in the West Indies.
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- 32 **Anderson** (Tempest) and **Flett** (John S.). Preliminary report on the recent eruption of the Soufrière in St. Vincent, and of a visit to Mont Pelée, in Martinique.
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- 37 — The Santa Eulalia [Mexico] ore deposits.
Eng. & Mg. Jour., vol. 76, pp. 350-351, ill., 1903.
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Describes the topography and the character and occurrence of Tertiary and Quaternary formations of California bordering the Pacific, and gives lists of fossils by formations showing geographical distribution and relations to existing faunas, and systematic descriptions of the genera and species. Includes descriptions of several new species of corals by T. Wayland Vaughan and of mollusca by W. H. Dall.
- 39 **Arreola** (José Maria). The recent eruptions of Colima [Mexico].
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- 40 **Ashley** (George Hall). The geology of the Lower Carboniferous area of southern Indiana.
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- 163 **Campbell** (H. D.) and **Howe** (James Lewis). *A new (?) meteoric iron from Augusta Co., Virginia*.
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- 164 **Campbell** (Marius R.). *Brownsville-Connellsville folio, Pennsylvania*.
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- 165 — *Geographic development of northern Pennsylvania and southern New York*.
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- 166 — *Variation and equivalence of the Charleston sandstone*.
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Reviews the divergent views as to the correlation of the sandstone of West Virginia, which the writer named the Charleston sandstone, with the Mahoning sandstone of Pennsylvania, and presents additional evidence for the author's view as to their distinctness.
- 167 — *Recent work in the bituminous coal field of Pennsylvania*.
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- 168 **Campbell** (Marius R.). Borax deposits of eastern California.
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- 169 — Basin-range structure in the Death Valley region of south-eastern California.
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- 170 — Pocono rocks in the Allegheny Valley.
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- 174 **Case** (E. C.). The osteology of *Embolophorus dollovianus*, Cope, with an attempted restoration.
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- 176 — The structure and relationships of the American Pelycosauria.
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- 178 — Notes on the Conrad collection of Vicksburg fossils, with descriptions of new species.
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- 180 **Chalmers** (Robert). Artesian borings, surface deposits, and ancient beaches in Ontario.
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- 181 **Chamberlin** (Thomas C.). The criteria requisite for the reference of relics to a glacial age.
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- 182 — Distribution of the internal heat of the earth.
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- 183 — Has the rate of rotation of the earth changed appreciably during geological history?
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- 184 — The origin of ocean basins on the planetesimal hypothesis.
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- 185 **Church** (John A.). The Tombstone, Arizona, mining district.
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- 189 **Clark** (P. Edwin), **Van Ingen** (Gilbert) and. Disturbed fossiliferous rocks in the vicinity of Rondout, N. Y.
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- 190 **Clark** (W. B.). The Cretaceous-Eocene boundary in the Atlantic coastal plain.
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- 191 **Clarke** (C. H.). Notes on the Michipicoten gold-belt.
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- 198 — Torsion of the lamellibranch shell, an illustration of Noetling's law.
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- 199 — Some Devonian worms.
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- 200 — Naples fauna in western New York.
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- 201 — Classification of New York series of geologic formations.
N. Y. State Mus., Handbook 19, 28 pp., 1903.
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- 203 — (assisted by Ruedemann, Rudolph). Catalogue of type specimens of Paleozoic fossils in New York State Museum.
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- 206 **Claypole** (Edward W.). The Devonian era in the Ohio basin.
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- 210 — Ellipsoidal structure in pre-Cambrian rocks of Lake Superior region.
Abstract: Geol. Soc. Am., Bull., vol. 14, p. 8, 1903.
- 211 — Vermilion district of Minnesota.
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- 212 **Cobb** (Collier). Origin of the sandhill topography of the Carolinas.
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- 213 — Recent changes in the North Carolina coast, with special reference to Hatteras Island.
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- 219 — **Dorsey** (Clarence W.) and. Soil survey of Montgomery County, Ohio.
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- 220 **Cohen** (E.). Über ein neues Meteoreisen von Locust Grove, Henry Co., Nord-Carolina, Vereinigte Staaten.
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- 224 **Coleman** (A. P.). The classification of the Archæan.
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- 241 **Coste** (Eugene). Volcanic origin of natural gas and petroleum.
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- 242 **Cowles** (Henry C.). The influence of underlying rocks on the character of the vegetation.
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- 257 — Modern rational relief of the earth's surface.
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- 262 — The Grand Gulf formation.
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- 263 — See Diller (J. S.); 302.

- 264 — See Arnold (Ralph), 38.

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- 272 --- Scotts Bluff folio, Nebraska.
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- 273 --- Some relations of Tertiary formations of the northern Great Plains.
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- 274 --- Comparison of stratigraphy of the Big Horn Mountains, Black Hills, and Rocky Mountain Front Range.
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- 275 **Davis** (C. A.). A contribution to the natural history of marl.
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- 277 --- Current notes on physiography.
Science, new ser., vol. 17, pp. 193-195, 1903.
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- 278 **Davis** (William Morris). Current notes on physiography.
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- 280 — Current notes on physiography.
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- 413 **Ford** (Frederick L.). The trap rock of the Connecticut Valley.
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- 456 — Tabulated list of invertebrate fossils from the Carboniferous section of Kansas.

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- 457 — See Diller, J. S., 302.

- 458 — See Washburne (Chester), 1265.

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- 472 — **Kemp** (J. F.) and. The Washington meeting of the Geological Society of America, December 30, 31, 1902, January 1 and 2, 1903.
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- 484 — Contribution to Indiana Paleontology. Part XV.
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- 497 **Halse** (Edward). Some silver-bearing veins of Mexico.
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- 526 — **Oil fields of the Texas-Louisiana Gulf Coastal Plain.**
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- 531 — **Emmons (S. F.). Contributions to economic geology, 1902.**
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- 656 **Julien** (Alexis A.). Genesis of the amphibole schists and serpentines of Manhattan Island, New York.

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- 660 — Iron-ore deposits of the Cranberry district, North Carolina-Tennessee.

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- 672 — Theodore G. White (Obituary).
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- 673 — Comments on the geology of Bingham Canyon, Utah.
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- 674 — The leucite hills of Wyoming.
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- 675 — Genetic classification of ore deposits.
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- 676 — and **Grabau** (A. W.). The Washington meeting of the Geological Society of America, December 30, 31, 1902, January 1 and 2, 1903.
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- 677 — and **Knight** (W. C.). Leucite hills of Wyoming.
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- 678 **Kemp** (James Furman), **Finlay** (George I.) and. The nephelite syenite area of San Jose, Tamaulipas, Mexico.
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- 680 **Keyes** (Charles Rollin). Geological structure of New Mexican bolson plains.
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- 953 — On recent models and restorations of a number of extinct animals, with a discussion of their probable habits and mode of life.
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- 972 **Pirsson** (Louis V.) and others. Quantitative classification of igneous rocks.
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- 973 **Poole** (Henry S.). Notes on Dr. Ami's paper on Dictyonema slates of Angus Brook, New Canaan, and Kentville, N. S.
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- 993 — The copper deposits of Bisbee, Arizona.
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- 994 — The geology and copper deposits of Bisbee, Arizona.
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- 995 — Genetic classification of ore deposits.
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- 998 **Raymond** (R. W.). Biographical notice of Clarence King.
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- 1000 **Read** (Thomas T.). Preliminary note upon the rare metals in the ore from the Rambler mine, Wyoming.
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- 1001 — Nodular-bearing schists near Pearl, Colorado.
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- 1004 — Age of the lavas of the plateau region [New Mexico and Arizona].
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- 1005 — Geology of the Fort Apache region in Arizona.
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- 1006 — The Jemez coal fields [New Mexico].
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- 1009 — The variation of glaciers VIII.
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- 1011 — Notes on Mounts Hood and Adams and their glaciers.
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- 1014 — **Taylor** (F. W.) and. Soil survey of the Abbeville area, South Carolina.
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- 1017 **Rickard** (T. A.). Across the San Juan Mountains.
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- 1019 — Water in veins—a theory.
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- 1020 — The syncline as a structural type.
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See Ulrich (E. O.) and Smith (W. S. T.), 1223.

- 1141 **Smith** (William G.). Soil survey from Raleigh to Newbern, N. C.

U. S. Dept. Agric., Field Oper. Div. Soils, 1900, 2d Rept., pp. 187-205, pls. 8-15, 1901.

Includes observations on physiographic features.

- 1142 — and **Bennett** (Frank, jr.). Soil survey of the Lebanon area, Pennsylvania.

U. S. Dept. Agric., Field Oper. Bur. Soils, 1901, 3d Rept., pp. 149-171, pls. 17-20, 1902.

Includes a brief account of the physiography and geology.

- 1143 — and **Martin** (J. O.). Soil survey of Harford County, Maryland.

U. S. Dept. Agric., Field Oper. Bur. Soils, 1901, 3d Rept., pp. 211-237, 1902.

Includes a short account of the physiography and geology.

- 1144 — Soil survey of the Toledo area, Ohio.

U. S. Dept. Agric., Field Oper. Bur. Soils, 1902, 4th Rept., pp. 383-402, pls. 21-23, 1903.

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- 1145 — Soil survey of the Columbus area, Ohio.

U. S. Dept. Agric., Field Oper. Bur. Soils, 1902, 4th Rept., pp. 403-423, pl. 24, 1903.

Includes a short account of the physiography and geology.

- 1146 — and **Carter** (William T., jr.). Soil survey of the Smedes area, Mississippi.

U. S. Dept. Agric., Field Oper. Bur. Soils, 1902, 4th Rept., pp. 325-348, pls. 16-18, 1903.

Includes a short account of the physiography and geology.

- 1147 **Smyth** (C. H., jr.). The Rossie lead veins [New York].

School of Mines Quart., vol. 24, pp. 421-429, 1 fig., 1903.

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- 1148 **Spencer** (Arthur Coe.) Pacific mountain system in British Columbia and Alaska.

Geol. Soc. Am., Bull., vol. 14, pp. 117-132, pls. 8-13, 1903.

Describes physiographic features and discusses their origin.

- 1149 **Spencer** (Arthur Coe). Mineral resources of the Encampment copper region, Wyoming.
U. S. Geol. Surv., Bull. no. 213, pp. 158-162, 1903.
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- 1150 — Reconnaissance examination of the copper deposits at Pearl, Colo.
U. S. Geol. Surv., Bull. no. 213, pp. 163-169, 1903.
Gives a brief account of the geography and geology of this region and describes the mining developments.
- 1151 — Manganese deposits of Santiago, Cuba.
U. S. Geol. Surv., Bull. no. 213, pp. 251-255, 1903.
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- 1152 **Spencer** (Joseph William Winthrop). On the geological relationship of the volcanoes of the West Indies.
Victoria Inst., Jour. Trans., vol. 35, pp. 198-207, 1 fig., 1903.
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- 1153 — Geological age of the West Indian volcanic formations.
Am. Geol., vol. 31, pp. 48-51, 1 fig., 1903.
Discusses the geologic history of the region.
- 1154 — Submarine valleys off the American coast and in the North Atlantic.
Geol. Soc. Am., Bull., vol. 14, pp. 207-226, pls. 19-20, figs. 1-2, 1903.
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- 1155 **Spurr** (Josiah Edward). Descriptive geology of Nevada south of the Fortieth Parallel and adjacent portions of California.
U. S. Geol. Surv., Bull. no. 208, 229 pp., 8 pls., 25 figs., 1903.
Describes physiographic features, character and occurrence of sedimentary and igneous rocks and ore deposits and structure of the region, including résumé of previous publications and unpublished data furnished by C. D. Walcott, H. W. Turner, F. B. Weeks, R. B. Rowe, G. H. Girty, and E. O. Ulrich.
- 1156 — The determination of the feldspars in thin section.
Am. Geol., vol. 31, pp. 376-383, 1903.
- 1157 — Ore deposits of Tonopah and neighboring districts, Nevada.
U. S. Geol. Surv., Bull. no. 213, pp. 81-87, 1903.
Describes the history of the development of the field, the topography, general geology, and character and occurrence of the ore deposits.

- 1158 **Spurr** (Josiah Edward). The ore deposits of Tonopah, Nevada (preliminary report).

U. S. Geol. Surv., Bull. no. 219, 34 pp., pl. 1, figs. 1-4, 1903.

Gives a brief history of the discovery and development of this mining district, and describes the geologic structure and history of the region, the periods and nature of mineralization, and the occurrence of the ores and their relation to the geologic structure.

- 1159 — Relation of rock segregation to ore deposition.

Eng. & Mg. Jour., vol. 76, pp. 54-55, 1903.

Discusses the origin of ore deposits.

- 1160 — The ore deposits of Tonopah, Nevada.

Eng. & Mg. Jour., vol. 76, pp. 769-770, ill., 1903.

Describes the geologic structure of the region and the occurrence of the ore deposits of precious metals.

- 1161 — A consideration of igneous rocks and their segregation or differentiation as related to the occurrence of ores.

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 288-340, 1903.

Discusses the relations of igneous rocks and ore deposits, and the origin of the latter.

- 1162 — [In discussion of paper by Waldemar Lindgren, "The geological features of the gold production of North America."]

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 1081-1083, 1903.

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- 1163 — The application of geology to mining.

Intern. Mg. Cong., Proc. 5th sess., pp. 80-86 [1903].

- 1164 — [Genetic classification of ore deposits.]

Abstract: Science, new ser., vol. 17, p. 274, 1903.

- 1165 — The relation of faults to topography.

Abstract: Science, new ser., vol. 17, p. 792, 1903.

- 1166 **Stanton** (Timothy W.). A new fresh-water molluscan faunule from the Cretaceous of Montana.

Am. Phil. Soc., Proc., vol. 42, pp. 188-199, pl. 4, 1903.

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- 1167 — **Alpheus Hyatt**.

Washington Acad. Sci., Proc., vol. 5, pp. 389-391, 1903.

- 1168 — See Diller (J. S.), 302.

- 1169 — See Hyatt (Alpheus), 625.

- 1170 — See Washburne (Chester), 1265.

- 1171 **Starbird** (H. B.). Secondary enrichment in arid regions.

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- 1172 **Stead** (Geoffrey). Notes on the surface geology of New Brunswick.
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- 1173 **Steel** (A. A.). The ore deposits of La Cananea [Mexico].
Eng. & Mg. Jour., vol. 76, pp. 458-460, ill., 1903.
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- 1174 **Steele** (James H.). The Joplin zinc district of southwestern Missouri.
Colo. Sch. Mines, Bull., vol. 1, pp. 43-50, ill., 1900.
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- 1175 **Sternberg** (Charles H.). Experiences with early man in America.
Kans. Acad. Sci., Trans., vol. 18, pp. 89-93, 1903.
Describes association of human relics with fossil bones of animals and discusses evidence as to their age.
- 1176 — The Permian life of Texas.
Kans. Acad. Sci., Trans., vol. 18, pp. 94-98, 1903.
Describes the occurrence of fossil remains and physical characters of the Permian Red Beds in Baylor County, Texas.
- 1177 — *Elephas columbi* and other mammals in the swamps of Whitman County, Washington.
Science, new ser., vol. 17, pp. 511-512, 1903.
Describes the occurrence of mammalian remains.
- 1178 — Notes on the Judith River group.
Science, new ser., vol. 17, pp. 870-872, 1903.
Discusses the occurrence of vertebrate fossils and the stratigraphic position of the Judith River beds.
- 1179 **Stevens** (Blamey). Geology of some copper deposits in Alaska.
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- 1180 — Relation of rock segregation to ore deposition.
Eng. & Mg. Jour., vol. 76, p. 574, 1903.
- 1181 **Stevens** (E. A.). Basaltic zones as guides to ore-deposits in the Cripple Creek district, Colorado.
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- 1182 **Stevenson** (John J.). Lower Carboniferous of the Appalachian basin.
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 Describes occurrence, stratigraphy, lithologic characters and geologic relations of Lower Carboniferous formations in the Appalachian region and discusses their nomenclature and correlation, and the physiographic conditions prevailing during their deposition.
- 1183 — J. Peter Lesley.
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- 1184 — Joseph Le Conte (obituary).
 Abstract: N. Y. Acad. Sci., Ann., vol. 14, pp. 150-151, 1902.
- 1185 **Stevenson** (Robert). The deposition of ores from an igneous magma.
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- 1186 **Stewart** (Alban). Teleosts of the Upper Cretaceous.
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- 1188 **Stoess** (P. C.). The Kayak coal and oil fields of Alaska.
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- 1189 **Stone** (G. H.). [Discovery of coal on Turkey Creek, Colorado.]
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- 1190 **Storms** (W. H.). Some structural features of the California gold belt.
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- 1191 **Stose** (George W.). The structure of a part of South Mountain, Pennsylvania.
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 U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 98, 1903.
 Describes geography, physiography, general relations, pre-Cambrian igneous rocks, Cambrian, Ordovician, Siluro-Devonian, Carboniferous and Cretaceous sedimentary rocks and Quaternary deposits, geologic structure of the Arbuckle Mountain region, and the mineral resources.

- 1193 **Talbot** (Mignon). A contribution to the list of the fauna of the Stafford limestone of New York.
Am. Jour. Sci., 4th ser., vol. 16, pp. 148-150, 1903.
- 1194 **Tarr** (Ralph S.). New physical geography.
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- 1195 — Post-Glacial and Inter-Glacial (?) changes of level at Cape Ann, Massachusetts.
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- 1196 **Taylor** (Frank Bursley). The correlation and reconstruction of recessional ice borders in Berkshire County, Massachusetts.
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- 1197 — Studies in the glaciation of the Berkshire Hills, Massachusetts.
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- 1198 **Taylor** (F. W.) and **Rice** (Thomas D.). Soil survey of the Abbeville area, South Carolina.
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- 1199 — **Bonsteel** (Jay A.) and. Soil survey of the Salem area, New Jersey.
See Bonsteel (J. A.) and Taylor (F. W.), 105.
- 1200 — **Rice** (Thomas D.) and. Soil survey of the Darlington area, South Carolina.
See Rice (T. D.) and Taylor (F. W.), 1012.
- 1201 **Teggart** (Frederick J.). Literature available in the [Mechanics' Institute] Library [San Francisco, California] on petroleum with some references on asphaltum.
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- 1202 **Thierry** (—). Sur l'éruption volcanique du 8 mai à la Martinique.
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U. S. Geol. Surv., Professional Paper no. 13, 111 pp., 17 pls., 1 fig., 1903.

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1204 **Titcomb** (H. A.). The Camp Bird gold mine and mills [Colorado].

School of Mines Quart., vol. 24, pp. 56-67, figs. 1-7, 1902.

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Geol. Soc. Am., Bull., vol. 14, pp. 353-368, pls. 49-53, 1903.

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1206 — Building stones of South Dakota.

Stone, vol. 26, pp. 20-27, ill., 1903.

Describes the character and geologic occurrence of building stones.

1207 — A newly discovered rock at Sioux Falls, South Dakota.

Stone, vol. 27, pp. 46-48, 1903.

Describes the occurrence and character of an igneous rock discovered in this vicinity.

1208 — Olivet folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 96, 1903.

Describes geography and topography, general geology, character and occurrence of Algonkian, Cretaceous and Quaternary deposits, geologic history, economic and water resources.

1209 — Parker folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 97, 1903.

Describes geography, general geology, and character and occurrence of Algonkian and Cretaceous strata and Quaternary deposits, the geologic history and economic resources, including underground waters.

1210 — Mitchell folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 99, 1903.

Describes geography, general geology, the character and occurrence of deposits belonging to the Algonkian, Cretaceous, and Quaternary systems, the geologic history and economic resources, more particularly the underground waters.

1211 — and **Hall** (C. M.). Alexandria folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 100, 1903.

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- 1212 **Todd** (James E.). See Winchell (N. H.), 1342.
- 1213 **Transeau** (Edgar N.). On the geographic distribution and ecological relations of the bog plant societies of northern North America.
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- 1214 **Turner** (Henry W.). Post-Tertiary elevation of the Sierra Nevada.
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- 1215 — The copper-deposits of the Sierra Oscura, New Mexico.
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- 1216 — The Cretaceous auriferous conglomerate of the Cottonwood mining district, Siskiyou County, California.
Eng. & Mg. Jour., vol. 76, pp. 653-654, ill., 1903.
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- 1217 — Notes on contact-metamorphic deposits in the Sierra Nevada Mountains.
Am. Inst. Mg. Engrs., Trans. (New York meeting, October, 1903), 2 pp.
Describes occurrences of deposits additional to those noted by Mr. Lindgren (Am. Inst. Mg. Engrs., Trans., vol. 31, pp. 230-231).
- 1218 — Observations on Mother Lode gold deposits, California.
[In discussion of paper of W. A. Prichard.]
Am. Inst. Mg. Engrs., Trans. (New York meeting, October, 1903), 2 pp.
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- 1219 **Tyrrell** (J. B.). A peculiar artesian well in the Klondike.
Eng. & Mg. Jour., vol. 75, p. 188, 1 fig, 1903.
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- 1220 **Udden** (Johan August). Geology of Mills and Fremont counties [Iowa].
Iowa Geol. Surv., vol. 13, pp. 123-183, pls. 4-7, 1903.
Describes topography and drainage, character, occurrence and geologic relations of Carboniferous and Cretaceous strata and surficial deposits, and economic resources. Includes a report by Prof. B. S. Shimek on the fossils from the loess of these counties.
- 1221 — Foraminiferal ooze in the Coal Measures of Iowa.
Jour. Geol., vol. 11, pp. 283-284, 1903.

- 1222 **Udden** (Johan August). Note to the article on "Foraminiferal ooze in the Coal Measures of Iowa."
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- 1223 **Ulrich** (Edward Oscar) and **Smith** (W. S. Tangier). Lead, zinc, and fluorspar deposits of western Kentucky.
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- 1224 — **Hayes** (C. Willard) and. Columbia folio, Tennessee.
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- 1225 **United States Geological Survey**. Geology, etc., of the Coosa Valley, Alabama.
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- 1226 **Upham** (Warren). Valley loess and the fossil man of Lansing, Kansas.
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- 1227 — The life and work of Professor Charles M. Hall.
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- 1228 — How long ago was America peopled?
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 Discusses time estimates of Glacial and post-Glacial periods and evidences of antiquity of man in America.
- 1229 — Glacial Lake Nicolet and the portage between the Fox and Wisconsin rivers.
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- 1231 — The glacial lakes Hudson-Champlain and St. Lawrence.
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- 1232 — Glacial Lake Jean Nicolet.
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 As the name Lake Nicollet had been previously used by Winchell, the writer amends his name Lake Nicolet to the form given above.
- 1233 — Geology of Prairie Island [Minnesota].
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- 1234 — The past and future of Niagara Falls.
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- 1235 **Van Diest** (P. H.). A mineralogical mistake.
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- 1236 **Van Hise** (Charles Richard). Geological work in the Lake Superior region.
 Lake Sup. Mg. Inst., Proc. for 1902, vol. 8, pp. 62-69 [1903].
 Discusses the difficulties of geologic work in this region and gives an historical review of the work that has been done.
- 1237 — Powell as an explorer.
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- 1238 — Genetic classification of ore deposits.
 Abstract: Science, new ser., vol. 17, pp. 542-543, 1903.
- 1239 **Van Ingen** (Gilbert). A method of facilitating photography of fossils.
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- 1241 **Vaughan** (T. Wayland). An addition to the coral fauna of the Aquia Eocene formation of Maryland.
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- 1242 — A redescription of the coral *Platytrochus speciosus*.
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- 1243 — Corrections to the nomenclature of the Eocene fossil corals of the United States.
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- 1244 — The corals of the Buda limestone.
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- 1245 — Fuller's earth deposits of Florida and Georgia.
 U. S. Geol. Surv. Bull. no. 213, pp. 392-399, 1903.
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- 1246 — See Arnold (Ralph), 38.
- 1247 **Veatch** (Arthur C.). The diversity of the Glacial period on Long Island.
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- 1248 **Veatch** (Arthur C.). Notes on the geology of Long Island.
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- 1249 **Villarello** (Juan D.). Genesis de los yacimientos mercuriales de Palomas y Huitzucó, en los estados de Durango y Guerrero de la Republica Mexicana.
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- 1251 **Voyle** (Joseph). Aurite, and a general theory of gold ore genesis.
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- 1252 **Wagner** (George). Observations on *Platygonus compressus* Le Conte.
Jour. Geol., vol. 11, pp. 777-782, figs. 1-4, 1903.
- 1253 **Walcott** (Charles D.). New term for the Upper Cambrian series.
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Proposes the term Saratogian for Upper Cambrian, and gives a list of formations referred to it.
- 1254 — John Wesley Powell.
Wash. Acad. Sci., Proc., vol. 5, pp. 99-130, pl. 1 (por.), 1903.
- 1255 — Twenty-fourth annual report of the Director of the United States Geological Survey to the Secretary of the Interior, 1902-3.
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The rules governing the nomenclature and classification of geologic formations promulgated in the Tenth Annual Report, pp. 63-79, have been recently revised and, as revised, are given in this report on pp. 21-27.
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- 1258 **Ward** (Henry A.). Catalogue of the Ward-Coonley collection of meteorites.
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- 1259 — The Bath Furnace [Kentucky] meteorite.
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- 1260 — The Andover [Maine] meteorite.
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- 1261 **Ward** (Lester F.). Correlation of the Potomac formation in Maryland and Virginia.
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- 1262 **Warman** (Philip Creveling). Catalogue and index of the publications of the United States Geological Survey, 1901 to 1903.
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- 1263 — Catalogue of the published writings of John Wesley Powell.
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1077	391	299	220	74
			221	222
			300	329
			1078	782
				914

1899	1900			
419	1	429	628	872
922	64	432	808	923
1079	310	497	869	1120
	324	624	870	1130

1901	1902			
81	20	356	672	858
82	21	402	692	874
95	42	416	699	911
102	43	453	711	915
103	50	468	712	916
104	71	497	713	941
227	79	500	714	942
234	86	504	715	943
242	105	518	716	961
311	106	534	717	962
312	107	541	718	966
313	114	561	719	967
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322	142	584	754	1008
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 Beaumont clays, Pleistocene, Texas, Hayes and Kennedy, 532.
 Beaver limestone, Cambrian, Georgia, Watson, 1272.
 Becraft limestone, Devonian, New Jersey, Weller, 1291.
 Becraft limestone, Devonian, New York, Grabau, 465.
 Becraft limestone, Devonian, New York, Van Ingen and Clark, 1240.
 Becraft limestone, Devonian, Maryland, Schuchert, 1092.
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- Bedford shale, Carboniferous, Ohio, Prosser, 982.
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- Beekmantown limestone, Champlainic, New York, Clarke, 201.
- Beekmantown stage, Ordovician, Pennsylvania, Collie, 228.
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- Bellton stage, Carboniferous, West Virginia, White, 1301.
- Bellvale flags, Devonian, New Jersey, Weller, 1291.
- Bellvale flags, Devonian, New York, Clarke, 201.
- Belly River beds, Cretaceous, Canada, Hatcher, 510.
- Belly River beds, Cretaceous, Canada, Hatcher and Stanton, 513.
- Bennington limestone, Cretaceous, Indian Territory, Taff, 1192.
- Benton formation, Cretaceous, Nebraska, Barbour, 56.
- Benton formation, Cretaceous, Nebraska, Carmony, 171.
- Benton formation, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
- Benton formation, Cretaceous, South Dakota, Todd and Hall, 1211.
- Berea grit, Carboniferous, Ohio, Bownocker, 117a.
- Berea grit, Carboniferous, Ohio, Prosser, 982.
- Berea grit, Carboniferous, Stevenson, Ohio, 1182.
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- Bethany Falls limestone, Carboniferous, Missouri, Gallaher, 429.
- Bigby limestone, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Big Injun, Carboniferous, West Virginia, Stevenson, 1182.
- Big Injun series, Carboniferous, Ohio, Bownocker, 117a.
- Birch Creek series, Alaska, Collier, 229.
- Birmingham shale, Carboniferous, West Virginia, White, 1301.
- Bisbee group, Cretaceous, Arizona, Ransome, 994.
- Biwabik formation, included in Upper Huronian, Minnesota, Clements, 209.
- Biwabik formation, included in Upper Huronian series, Algonkian, Minnesota, Leith, 786.
- Black Hand formation, Carboniferous, Ohio, Prosser, 982.
- Black River limestone, Ordovician, Missouri, Gallaher, 429.

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- Black River stage, Ordovician, Pennsylvania, Collie, 228.
- Blanco beds, Pliocene, Tertiary, Texas, Gidley, 440.
- Blowing Rock gneiss, Archean, North Carolina, Keith, 659.
- Bokchito formation, Cretaceous, Indian Territory, Taff, 1192.
- Bolinas sandstone, California, Lawson, 776.
- Bolsa quartzite, Cambrian, Arizona, Ransome, 994.
- Bolton gneiss, Massachusetts, Perry and Emerson, 971.
- Bonita sandstone, California, Lawson, 776.
- Bossardville limestone, Silurian, New Jersey, Weller, 1291.
- Bragdon formation, Carboniferous, California, Diller, 302.
- Bretonian division, Cambrian, Canada, Mathew, 858.
- Bridgeton formation, Pleistocene, New Jersey, Salisbury, 1053.
- Brimfield schist, Massachusetts, Perry and Emerson, 971.
- Brownspout bed, Silurian, Tennessee, Foerste, 408.
- Brule clay, Oligocene, Tertiary, Nebraska, Barbour, 56.
- Brule clay, Tertiary, Nebraska, Darton, 271.
- Brule formation (Oligocene), Tertiary, Wyoming, Smith, 1138.
- Buchanan gravels, Quaternary, Iowa, Calvin, 158.
- Buda limestone, Cretaceous, Texas, Shattuck, 1098.
- Buffalo sandstone, Carboniferous, West Virginia, White, 1301.
- Burden conglomerate, Ordovician, New York, Grabau, 465.
- Burlingame shales, Carboniferous, Kansas, Adams, 10.
- Burlington-Keokuk or Carthage limestone, Carboniferous, Missouri, Gallaher, 429.
- Cacaquabic granite, Algonkian, Minnesota, Clements, 209.
- Caddo limestone, Cretaceous, Indian Territory, Taff, 1192.
- Calceferous, Ordovician, Missouri, Gallaher, 429.
- Calera limestone, California, Lawson, 776.
- Calhoun shales, Carboniferous, Kansas, Adams, 10.
- Callaway limestone, Devonian, Missouri, Gallaher, 429.
- Cambridge, Upper and Lower, limestone, Carboniferous, West Virginia, White, 1301.
- Camden chert, Devonian, Tennessee, Foerste, 408.
- Camden series, Tertiary, Texas, Hill, 568.
- Camillus shale, Ontario, New York, Clarke, 201.
- Campan, California, Lawson, 776.
- Campbells Creek limestone, Carboniferous, West Virginia, White, 1301.
- Canaan shales, Carboniferous, West Virginia, Stevenson, 1182.

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- Canadian, Champlainic, New York, Clarke, 201.
- Canandaigua shale, Devonian, New York, Clarke, 201.
- Caney shale, Carboniferous, Indian Territory, Taff, 1192.
- Cannelton (Stockton) limestone, Carboniferous, West Virginia, White, 1301.
- Cape May formation, Pleistocene, New Jersey, Salisbury, 1053.
- Carmichael clay, Quaternary, Pennsylvania, Campbell, 164.
- Carolina gneiss, Archean, North Carolina, Keith, 659.
- Carters limestone, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Carthage limestone, Carboniferous, Missouri, Gallaher, 429.
- Cascade formation, Cretaceous, Montana, Stanton, 1166.
- Cashaqua shales, Devonian, New York, Luther, 820.
- Cashaqua shale, Devonian, New York, Clarke, 201.
- Cashaqua shales, Devonian, New York, Clarke, 200.
- Cassville plant shale, Carboniferous, West Virginia, White, 1301.
- Catheys formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Catskill beds, Devonian, New York, Clarke, 201.
- Catskill sandstone, Devonian, Claypole, 206.
- Cattaraugus beds, Carbonic, New York, Clarke, 201.
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- Cattaraugus beds, Devonian, New York, Glenn, 459.
- Cattaraugus formation, Devonian, Pennsylvania, Fuller and Alden, 423, 424.
- Cayuga, Ontario, New York, Clarke, 201.
- Cedar Valley stage, Devonian, Iowa, Calvin, 158.
- Cedar Valley stage, Devonian, Iowa, Savage, 1071.
- Cedarville limestone, Silurian, Ohio, Prosser, 982.
- Centerfield limestone, Devonian, New York, Clarke, 201.
- Chadron formation, Oligocene, Tertiary, Nebraska, Barbour, 56.
- Chadron formation, Tertiary, Nebraska, Darton, 271.
- Chadron formation (Oligocene), Tertiary, Wyoming, Smith, 1138.
- Chagrin formation, Devonian, Ohio, Prosser, 982.
- Champlainic, New York, Clarke, 201.
- Chanute shales, Carboniferous, Kansas, Adams, 10.
- Charlton conglomerate, Pennsylvanian series, Beyer and Young, 78.
- Charleston sandstone, Carboniferous, West Virginia, Campbell, 166.
- Chattahoochee group, Tertiary, Florida, Dall, 261.

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- Chattanooga shale, Devonian, Tennessee, Hayes and Ulrich, 533.
- Chattanooga black shale, Devonian, Tennessee, Foerste, 408.
- Chautauquan, Devonian, New York, Clarke, 201.
- Chemung beds, Devonian, New York, Clarke, 201.
- Chemung formation, Devonian, Pennsylvania, Fuller and Alden, 423, 424.
- Chemung shales, Devonian, New York, Glenn, 459.
- Chemung period, Devonian, New York, Schneider, 1077.
- Cherokee shales, Carboniferous, Kansas, Adams, 10.
- Cherryville shales, Carboniferous, Kansas, Adams, 10.
- Chester group, Carboniferous, Kentucky, Ulrich and Smith, 1223.
- Chico, California, Lawson, 776.
- Chipola beds, Tertiary, Florida, Dall, 261.
- Chico formation, Cretaceous, Oregon, Washburne, 1265.
- Chitstone limestone, Carboniferous, Alaska, Schrader and Spencer, 1084.
- Chitstone limestone, probably Permian, Alaska, Mendenhall and Schrader, 880.
- Chouteau beds, Carboniferous, Missouri, Gallaher, 429.
- Chuar series, Nevada, Spurr, 1155.
- Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Cincinnati series, Ordovician, Ohio, Indiana, and Kentucky, Foerste, 409.
- Cincinnati, Champlainic, New York, Clarke, 201.
- Cincinnati flags, Devonian, New York, Clarke, 201.
- Cintura formation, Cretaceous, Arizona, Ransome, 991.
- Claggett formation, Cretaceous, Montana, Hatcher and Stanton, 513.
- Claiborne, Lower, Eocene, Tertiary, Georgia, Harris, 504.
- Claiborne, Lower, stage, Eocene, Texas, Dumble, 332.
- Claibornian, Tertiary, Florida, Dall, 261.
- Clarendon beds, Miocene, Tertiary, Texas, Gidley, 440.
- Clarion sandstone, Carboniferous, West Virginia, White, 1301.
- Clarksburg limestone, Carboniferous, West Virginia, White, 1301.
- Cleveland shale, Devonian, Ohio, Claypole, 206.
- Cleveland shale, Devonian, Ohio, Prosser, 982.
- Clifton limestone, Silurian, Tennessee, Hayes and Ulrich, 533.
- Clifton limestone, Tennessee, Foerste, 410.
- Clifton limestone, equivalent to Niagara, Silurian, Tennessee, Foerste, 408.
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- Clinton beds, Silurian, Missouri, Gallaher, 429.
- Clinton formation, Silurian, Ohio, Bownocker, 117.

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- Clinton group, Silurian, New York, Schneider, 1077.
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 Cobleskill limestone, Silurian, New York, Hartagel, 505.
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 Coeymans limestone, Devonian, Maryland, Schuchert, 1092.
 Coeymans limestone, Devonian, New York, Clarke, 201.
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 Como beds, Jurassic, Wyoming, Stanton, 1166.
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 Conemaugh formation (Lower Barren Coal Measures), Carboniferous, Ohio, Prosser, 982.
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 Dakota formation, Cretaceous, Nebraska, Barbour, 56.
 Dakota formation, Cretaceous, Nebraska, Carmony, 171.
 Dakota formation, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
 Dakota formation, Cretaceous, South Dakota, Todd and Hall, 1211.
 Dakota group, Cretaceous, New Mexico, Johnson, 646.
 Dakota sandstone, Cretaceous, Wyoming, Smith, 1138.
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 Decker Ferry formation, Silurian, New Jersey, Weller, 1291.
 Deepkill shale, Champlainic, New York, Clarke, 201.
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- Dixon clay, Silurian, Tennessee, Foerste, 408.
- Dorans Cove sandstone, Carboniferous, Alabama, Stevenson, 1182.
- Doyle shales, Carboniferous, Kansas, Adams, 10.
- Dresbach formation, Cambrian, Upper, Wisconsin and Minnesota, Berkeley, 74.
- Drum limestone, Carboniferous, Indian Territory, Adams, 10.
- Drum shales, Carboniferous, Kansas, Adams, 10.
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- Duluth gabbro, included in Keweenawan, Minnesota, Clements, 209.
- Duluth gabbro, included in Keweenawan, Minnesota, Leith, 786.
- Dunkard formation, Carboniferous, Pennsylvania, Campbell, 164.
- Dunkard formation (Upper Barren Coal Measures), Carboniferous, Ohio, Prosser, 982.
- Dunkard series, Carboniferous, West Virginia, White, 1301.
- Dunkirk shale, Devonian, New York, Clarke, 201.
- Dunkirk shales, Devonian, New York, Clarke, 200.
- Eagle formation, Cretaceous, Montana, Hatcher and Stanton, 513.
- Eagle limestone, Carboniferous, West Virginia, White, 1301.
- Earlton limestone, Carboniferous, Kansas, Adams, 10.
- Easton schist, pre-Eocene, Washington, Smith, 1132.
- Elk Lick limestone, Carboniferous, West Virginia, White, 1301.
- Ellensburg formation, Miocene, Tertiary, Washington, Smith, 1131, 1132.
- Elmdale formation, Carboniferous, Kansas, Adams, 10.
- Ely greenstone, Archean, Minnesota, Clements, 209.
- Embarrass granite, included in Keweenawan, Minnesota, Leith, 786.
- Emerald limestone, Arizona, Church, 185.
- Emerald series, Arizona, Blake, 86.
- Empire formation, Tertiary, Oregon, Diller, 301.
- Emporia limestone, Carboniferous, Kansas, Adams, 10.
- Equus beds, Pleistocene, Texas, Dumble, 332.
- Erian, Devonian, New York, Clarke, 201.
- Erle shale, Devonian, Ohio, Stevenson, 1182.
- Erwin quartzite, Cambrian, Tennessee, Keith, 659.
- Escabrosa limestone, Carboniferous, Arizona, Ransome, 994.
- Eskridge shales, Carboniferous, Kansas, Adams, 10.
- Esmeralda formation, Nevada, Spurr, 1155.

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- Esopus grit, Devonian, New Jersey, Weller, 1291.
- Esopus grit, Devonian, New York, Grabau, 465.
- Esopus grit, Devonian, New York, Van Ingen and Clark, 1240.
- Esopus grit, Devonian, New York, Clarke, 201.
- Etcheminian terrane, Cambrian, Canada, Matthew, 858.
- Eureka quartzite, Nevada, Spurr, 1155.
- Eutaw formation, Cretaceous, Alabama, Smith, 1126.
- Fayette sands, Eocene, Texas, Dumble, 332.
- Fayette sands, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
- Fayette sands, Tertiary, Texas, Hill, 568.
- Fernvale formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Fish Creek sandstone, Carboniferous, West Virginia, White, 1301.
- Flattop schist, Algonkian?, North Carolina, Keith, 659.
- Fleming beds (Frio clays), Tertiary, Texas, Hill, 568.
- Flint Creek beds, Tertiary, Montana, Douglass, 317.
- Florence flint, Carboniferous, Kansas, Adams, 10.
- Floyd shale, Carboniferous, Tennessee, Stevenson, 1182.
- Forbes limestone, Carboniferous, Missouri, Gallaher, 429.
- Forest City sandstone, Carboniferous, Missouri, Gallaher, 429.
- Fort Benton group, Cretaceous, New Mexico, Johnson, 646.
- Fort Logan beds, Tertiary, Montana, Douglass, 317.
- Fort Payne chert, Carboniferous, Tennessee, Stevenson, 1182.
- Fort Pierre group, Cretaceous, New Mexico, Johnson, 646.
- Fort Riley limestone, Carboniferous, Kansas, Adams, 10.
- Fort Scott limestone, Carboniferous, Indian Territory, Adams, 10.
- Fort Scott limestone, Carboniferous, Kansas, Adams, 10.
- Fort Union beds, Cretaceous, New Mexico, Reagan, 1003.
- Fortymile series, Alaska, Collier, 229.
- Fox Hills [formation], Cretaceous, New Mexico, Reagan, 1003.
- Franciscan, California, Lawson, 776.
- Franconia sandstone, Upper Cambrian, Wisconsin and Minnesota, Berkeley, 74.
- Franks conglomerate, Carboniferous, Indian Territory, Taff, 1192.
- Freeport, Lower, sandstone, Carboniferous, West Virginia, White, 1301.
- Freeport, Upper, limestone, Carboniferous, West Virginia, White, 1301.
- Frio clays, Eocene, Texas, Dumble, 332.
- Frio clays, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
- Galena-Trenton formation, Ordovician, Iowa, Calvin, 158.

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- Galesburg shales, Carboniferous, Kansas, Adams, 10.
 Galliteosand group, Cretaceous, New Mexico, Johnson, 646.
 Gardeau flags, Devonian, New York, Clarke, 201.
 Gardeau shales and flags, Devonian, New York, Luther, 820.
 Garrison formation, Carboniferous, Kansas, Adams, 10.
 Genesee black shale, Devonian, Missouri, Gallaway, 429.
 Genesee shale, Devonian, New York, Clarke, 201.
 Genesee shales, Ontario, Parks, 958.
 Genesee shales, Devonian, New York, Luther, 820.
 Genesee slate, Devonian, New York, Schneider, 1077.
 Geneva limestone, Devonian, Indiana, Newsom, 929.
 Genundewa limestone, Devonian, New York, Luther, 820.
 Georgia slates, Cambrian, New York, Clarke, 201.
 Gering formation, Miocene, Tertiary, Nebraska, Barbour, 56.
 Gering formation, Tertiary, Nebraska, Darton, 271.
 Giants Range granite, Algonkian, Minnesota, Clements, 209.
 Gila conglomerate, Pleistocene?, Arizona, Ransome, 991.
 Gilboy sandstone, Carboniferous, West Virginia, White, 1301.
 Gilmore sandstone, Carboniferous, West Virginia, White, 1301.
 Glance conglomerate, Cretaceous, Arizona, Ransome, 994.
 Glenkirk limestone, Silurian, Tennessee, Foerste, 408.
 Glenn formation, Pennsylvanian, Carboniferous, Indian Territory, Taff, 1192.
 Globe limestone, Devonian and Carboniferous, Arizona, Ransome, 991.
 Goodland limestone, Cretaceous, Indian Territory, Taff, 1192.
 Goodnight (Paloduro) beds, Miocene, Tertiary, Texas, Gidley, 440.
 Grainger shale, Devonian, Virginia and Tennessee, Stevenson, 1182.
 Grand Canyon group, Nevada, Spurr, 1155.
 Grand Gulf formation, Smith and Aldrich, 1127.
 Grand Gulf formation, Tertiary, Gulf region, Dall, 262.
 Grand Gulf formation, Tertiary, Gulf region, Hilgard, 565.
 Graneros formation, Cretaceous, Wyoming, Smith, 1138.
 Great limestone, Carboniferous, West Virginia, White, 1301.
 Greenbrier limestone, Virginia, Eckel, 352.
 Greenbrier limestone, Carboniferous, Maryland, Virginia, and West Virginia, Stevenson, 1182.

Geologic formations described—Continued.

- Greenbrier limestone lentil, Carboniferous, Pennsylvania, Campbell, 164.
 Green Pond conglomerate, Silurian, New Jersey, Weller, 1221.
 Grenville series, Canada, Coleman, 224.
 Grimes sandstone, Devonian, New York, Clarke, 200.
 Grimes sandstone, Devonian, New York, Luther, 820.
 Grimes sandstone, Devonian, New York, Clarke, 201.
 Guelph, Silurian, New York and Ontario, Clarke and Ruedemann, 204.
 Guelph dolomite, Ontario, New York, Clarke, 201.
 Guernsey formation, Carboniferous, Wyoming, Smith, 1138.
 Gunflint formation, included in Upper Huronian (Animikie), Minnesota, Clements, 209.
 Gypsum series, New Mexico, Reagan, 1003.
 Hamburg limestone and shale, Nevada, Spurr, 1155.
 Hamilton beds, Devonian, New York, Clarke, 201.
 Hamilton formation, Devonian, New York, Cleland, 207.
 Hamilton formation, Ontario, Parks, 958.
 Hamilton group, Devonian, New York, Schneider, 1077.
 Hamilton (Callaway) limestone, Devonian, Missouri, Gallaher, 429.
 Hampshire for Catskill, Devonian, Appalachian region, Stevenson, 1182.
 Hampton shale, Cambrian, North Carolina and Tennessee, Keith, 659.
 Hannibal shales, Devonian, Missouri, Gallaher, 429.
 Hardin sandstone, Devonian, Tennessee, Foerste, 408.
 Hardyston quartzite, Cambrian, New Jersey, Weller, 1291.
 Harrodsburg limestone, Carboniferous, Indiana, Newsom, 929.
 Harrodsburg limestone, Lower Carboniferous, Indiana, Ashley, 40.
 Harrodsburg limestones and shales, Carboniferous, Indiana, Hopkins, 604.
 Hartford limestone, Carboniferous, Kansas, Adams, 10.
 Hartselle sandstones, Carboniferous, Alabama, Stevenson, 1182.
 Hartville formation, Carboniferous, Wyoming, Smith, 1138.
 Hastings series, Canada, Coleman, 224.
 Hatch flags and sands, Devonian, New York, Luther, 820.
 Hatch shales and flags, Devonian, New York, Clarke, 200.
 Hawkins formation, pre-Eocene, Washington, Smith, 1132.
 Hazlet sands, included in Matawan formation, Cretaceous, New Jersey, Berry, 76.
 Helderbergian, Devonian, New York, Clarke, 201.
 Hermitage formation, Ordovician, Tennessee, Hayes and Ulrich, 533.

Geologic formations described—Continued.

- Herschel quartzite, Arizona, Church, 185.
 Hertha limestone, Carboniferous, Kansas, Adams, 10.
 Highpoint sandstone, Devonian, New York, Clarke, 201.
 Hilliard formation, Cretaceous, Wyoming, Knight, 695.
 Hillsboro sandstone, Silurian, Ohio, Prosser, 982.
 Hinton formation, Carboniferous, West Virginia, Stevenson, 1182.
 Hosselkuss limestone, Triassic, California, Diller, 302.
 Howard limestone, Carboniferous, Kansas, Adams, 10.
 Hudson River beds, Ordovician, Missouri, Gallaher, 429.
 Hudson River (or Cincinnati) group, Ordovician, Indiana, Newsom, 929.
 Hudson River shales, Ordovician, New York, Grabau, 465.
 Hudson River slates, Ordovician, New Jersey, Weller, 1291.
 Humboldt series, Nevada, Spurr, 1155.
 Huntingdon, Carboniferous, Pennsylvania, Stevenson, 1182.
 Hunton limestone, Siluro-Devonian, Indian Territory, Taff, 1192.
 Huron group, Lower Carboniferous, Indiana, Ashley, 40.
 Huron limestone and sandstone, Carboniferous, Indiana, Hopkins, 604.
 Huron shale, Devonian, Ohio, Prosser, 982.
 Huronian, Ontario, Bolton, 98.
 Huronian, Canada, Coleman, 224.
 Huronian, Ontario, Graton, 478.
 Huronian, Lower, Minnesota, Clements, 209.
 Huronian, Upper (Animikie), Minnesota, Clements, 209.
 Huronian series, Lower, Algonkian, Minnesota, Leith, 786.
 Huronian series, Upper, Algonkian, Minnesota, Leith, 786.
 Idaho formation, Tertiary, Idaho, Lindgren and Drake, 806.
 Illinoian drift, Quaternary, Ohio, Prosser, 982.
 Iola limestone, Carboniferous, Kansas, Adams, 10.
 Iowan drift, Quaternary, Iowa, Savage, 1071.
 Iowan drift (?), Quaternary, Ohio, Prosser, 982.
 Iowan loess, Quaternary, Iowa, Calvin, 158.
 Iowan till, Quaternary, Iowa, Calvin, 158.
 Irondale limestone, Carboniferous, West Virginia, White, 1301.
 Ithaca beds, Devonian, New York, Clarke, 201.
 Jacksonboro white limestone, Tertiary, Florida, Dall, 261.
 Jameco gravels, Quaternary, New York, Veatch, 1247.
 Jeffersonville limestone, Devonian, Indiana, Newsom, 929.
 Jemez marls, Pliocene, Tertiary, New Mexico, Reagan, 1003.

Geologic formations described—Continued.

- Jennings for Chemung, Devonian, Appalachian region, Stevenson, 1182.
 Johannian division, Cambrian, Canada, Matthew, 858.
 Judith River beds, Cretaceous, Montana, Hatcher, 510, 512.
 Judith River beds, Cretaceous, Montana, Hatcher and Stanton, 513.
 Judith River beds, Cretaceous, Montana, Osborn, 950.
 Judith River beds, Montana, Sternberg, 1178.
 Kanab, Upper and Lower, Triassic, Utah, Huntington and Goldthwait, 623.
 Kanawha black flint, Carboniferous, West Virginia, White, 1301.
 Kanawha series, Carboniferous, West Virginia, White, 1301.
 Kansan drift, Quaternary, Iowa, Macbride, 824.
 Kansan drift, Quaternary, Iowa, Savage, 1071.
 Kansan till, Quaternary, Iowa, Calvin, 158.
 Kansas City limestone, Carboniferous, Missouri, Gallaher, 429.
 Kanwaka shales, Carboniferous, Kansas, Adams, 10.
 Karquinez, California, Lawson, 776.
 Kaskaskia group, Carboniferous, Indiana, Newsom, 929.
 Kaskaskia limestone, Carboniferous, Missouri, Gallaher, 429.
 Kenai series, Eocene, Tertiary, Alaska, Collier, 229.
 Kennicott formation, Jura-Cretaceous, Alaska, Mendenhall and Schrader, 880.
 Kennicott formation, Upper Jurassic or Lower Cretaceous, Alaska, Schrader and Spencer, 1084.
 Keweenawan, Minnesota, Clements, 209.
 Keweenawan, Minnesota, Leith, 786.
 Klutina series, pre-Silurian (?), Alaska, Schrader and Spencer, 1084.
 Knapp beds, Carbonic, New York, Clarke, 201.
 Knapp beds, Carboniferous, New York, Glenn, 459.
 Knife Lake slates, Algonkian, Minnesota, Clements, 209.
 Knobstone, Carboniferous, Kentucky, Stevenson, 1182.
 Knobstone, Lower Carboniferous, Indiana, Ashley, 40.
 Knobstone group, Carboniferous, Indiana, Newsom, 929.
 Knobstone (Upper) shale, included in Knobstone group, Carboniferous, Indiana, Newsom, 929.
 Knobstone shales and sandstones, Carboniferous, Indiana, Hopkins, 604.
 Knobstone sandstone, Carboniferous, Indiana, included in Knobstone group, Newsom, 929.
 Knox dolomite, Ordovician, Georgia, Watson, 1272.
 Knoxville, California, Lawson, 776.
 Knoxville formation, Cretaceous, Oregon, Washburne, 1265.

Geologic formations described—Continued.

- Kiamichi formation, Cretaceous, Indian Territory, Taft, 1192.
 Killbuck conglomerate, Carbonic, New York, Clarke, 201.
 Killbuck conglomerate lentil, included in Cattaraugus beds, Devonian, New York, Glenn, 459.
 Kinderhook stage, Lower Carboniferous or Mississippian series, Iowa, Savage, 1071.
 Kingston beds, Devonian, New Jersey, Weller, 1291.
 Kittatinny limestone, Cambrian and Ordovician, New Jersey, Weller, 1291.
 Kolpato formation, Nevada, Spurr, 1155.
 Labette shales, Carboniferous, Kansas, Adams, 10.
 Lafayette sands, Neocene, Texas, Hayes and Kennedy, 532.
 Lagarto beds, Neocene, Texas, Dumble, 332.
 Lagarto clays, Texas, Dumble, 330.
 Lakota formation, Cretaceous, Black Hills region, Stanton, 1166.
 Lance Creek (Ceratops) beds, Cretaceous, Wyoming, Hatcher, 510.
 Lane shales, Carboniferous, Kansas, Adams, 10.
 Laona sandstone, Devonian, New York, Clarke, 200.
 Laona sandstone, Devonian, New York, Clarke, 201.
 Lapara beds, Neocene, Texas, Dumble, 332.
 Laramie, Cretaceous, Wyoming, Knight, 695.
 Laramie formation, Cretaceous, Hay, 514.
 Laramie formation, Cretaceous, Nebraska, Barbour, 56.
 Lauderdale chert, Carboniferous, Alabama, Stevenson, 1182.
 Laurel limestone, Silurian, Tennessee, Foerste, 408.
 Laurentian, Ontario, Bolton, 98.
 Laurentian, Ontario, Graton, 478.
 Lebanon limestone, Ordovician, Tennessee, Hayes and Ulrich, 533.
 Lecompton limestone, Carboniferous, Kansas, Adams, 10.
 Lego limestone, Silurian, Tennessee, Foerste, 408.
 Lelpers formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
 Lelpers Creek limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
 Le Roy shales, Carboniferous, Kansas, Adams, 10.
 Liberty beds, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
 Lignite stage, Eocene, Texas, Dumble, 332.
 Linden bed, Devonian, Tennessee, Foerste, 408.
 Linden limestone, Tennessee, Foerste, 410.
 Linville metadiabase, Algonkian?, North Carolina and Tennessee, Keith, 659.
 Little Cottonwood granite, Utah, Emmons, 372.
 Little Falls dolomite, Champlainic, New York, Clarke, 201.

Geologic formations described—Continued.

- Lockport dolomite, Ontario, New York, Clarke, 201.
 Logan, Carboniferous, Ohio, Stevenson, 1182.
 Logan, upper part of Pocono, Carboniferous, Appalachian region, Stevenson, 1182.
 Logan formation, Carboniferous, Ohio, Prosser, 982.
 Logan group, Carboniferous, Ohio, Bownocker, 117a.
 Logan sills, Minnesota, included in Keweenaw, Clements, 209.
 Lone Mountain limestone, Nevada, Spurr, 1155.
 Long Beards riffs sandstone, Devonian, New York, Luther, 820.
 Longbeards riffs sandstone, Devonian, New York, Clarke, 201.
 Longwood sandstone, Silurian, New Jersey, Weller, 1291.
 Lorraine beds, Champlainic, New York, Clarke, 201.
 Lorraine formation, Ordovician, Ohio, Prosser, 982.
 Lorraine stage, Ordovician, Pennsylvania, Collic, 28.
 Lost Gulch monzonite, Arizona, Ransome, 991.
 Louisiana limestone, Devonian, Missouri, Gallaher, 429.
 Louisville limestone, Silurian, Tennessee, Foerste, 408.
 Loup Fork beds, Tertiary, Nebraska, Barbour, 56.
 Loup Fork formation, Tertiary, Montana, Douglass, 317.
 Loup Fork stage, Miocene, Tertiary, Texas, Gidley, 440.
 Lower Helderberg, Silurian, Ohio, Bownocker, 117a.
 Lower Helderberg period, Silurian, New York, Schneider, 1077.
 Lower Helderberg or Waterline formation, Ontario, Parks, 958.
 Lowville limestone, Champlainic, New York, Clarke, 201.
 Lucas limestone, Silurian, Ohio, Prosser, 982.
 Lucky Cuss limestone, Arizona, Church, 185.
 Lufkin deposits (Yegua), Tertiary, Texas, Hill, 568.
 McCloud limestone, Carboniferous, California, Diller, 302.
 McCloud shale, Carboniferous, California, Diller, 302.
 Madera diorite, pre-Cambrian, Arizona, Ransome, 991.
 Madison formation, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
 Madison Valley beds, Tertiary, Montana, Douglass, 317.
 Madrid coal group, Cretaceous, New Mexico, Johnson, 646.
 Mahoning limestone, Carboniferous, West Virginia, White, 1301.
 Mahoning sandstone, Carboniferous, Missouri, Gallaher, 429.

Geologic formations described—Continued.

- Mahoning sandstone, member of Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 164.
- Mahoning sandstone stage, Carboniferous, West Virginia, White, 1301.
- Manastash formation, Eocene, Washington, Smith, 1132.
- Manhasset beds, Quaternary, New York, Veatch, 1247.
- Manlius limestone, Silurian, New Jersey, Weller, 1291.
- Manlius limestone, Silurian, New York, Graubau, 465.
- Manlius limestone, Silurian, New York, Hartnagel, 505.
- Manlius, Silurian, New York, Schuchert, 1089.
- Manlius limestone, Silurian, New York, Van Ingen and Clark, 1240.
- Manlius formation, Ontaric, Maryland, Schuchert, 1092.
- Manlius limestone, Ontaric, New York, Clarke, 201.
- Mannie shale, included in Richmond, Ordovician, Tennessee, Foerste, 407.
- Mansfield sandstone, Carboniferous, Indiana, Newsom, 929.
- Maquoketa or Hudson River, Ordovician, Iowa, Calvin, 158.
- Marcellus shale, Devonian, New York, Schneider, 1077.
- Marcellus shales, included in Hamilton, Devonian, New York, Cleland, 207.
- Marietta sandstones, Carboniferous, West Virginia, White, 1301.
- Marine beds, Eocene, Texas, Dumble, 332.
- Marion formation, Carboniferous, Kansas, Adams, 10.
- Martin limestone, Devonian, Arizona, Ransome, 994.
- Martinez, California, Lawson, 776.
- Mason shales, Carboniferous, West Virginia, White, 1301.
- Matawan formation, Cretaceous, New Jersey, Berry, 76.
- Matfield shales, Carboniferous, Kansas, Adams, 10.
- Mauch Chunk, Lower Carboniferous, Appalachian region, Stevenson, 1182.
- Mauch Chunk formation, Carboniferous, Pennsylvania, Campbell, 164.
- Mauch Chunk formation, Carboniferous, Pennsylvania, Fuller and Alden, 424.
- Mauch Chunk shale, Carboniferous, Pennsylvania, Fuller and Alden, 423.
- Maxville limestone, Carboniferous, Ohio, Prosser, 982.
- Maxville limestone, Lower Carboniferous, Ohio, Stevenson, 1182.
- Meadville shales, Carboniferous, Pennsylvania, Stevenson, 1182.
- Medina sandstone, Silurian, New Jersey, Weller, 1291.
- Medina shales, Silurian, Ohio, Prosser, 932.
- Mentor beds, included in the Dakota, Cretaceous, Kansas, Jones, 653.

Geologic formations described—Continued.

- Merced, California, Lawson, 776.
- Mercer group, Carboniferous, Appalachian region, White, 1299.
- Merom sandstone, Carboniferous (?), Indiana, Newsom, 929.
- Middlesex shale, Devonian, New York, Clarke, 201.
- Middlesex shales, Devonian, New York, Clarke, 200.
- Millbury limestone, Massachusetts, Perry and Emerson, 971.
- Minnekahta, Permian, Carboniferous, South Dakota, Richardson, 1015.
- Minnekahta limestone (Permian?), Carboniferous, Wyoming, Smith, 1138.
- Missourian stage, Carboniferous, Iowa, Udden, 1220.
- Mitchell limestone, Carboniferous, Indiana, Hopkins, 604.
- Mitchell limestone, Carboniferous, Indiana, Newsom, 929.
- Mitchell limestone, Lower Carboniferous, Indiana, Ashley, 40.
- Mohawkian, Champlainic, New York, Clarke, 201.
- Monongahela formation, Carboniferous, Pennsylvania, Campbell, 164.
- Monongahela formation (Upper Productive Coal-measures), Carboniferous, Ohio, Prosser, 982.
- Monongahela series, Carboniferous, West Virginia, White, 1301.
- Monroe beds, Pennsylvania series, Iowa, Beyer and Young, 78.
- Monroe formation, Silurian, Ohio, Prosser, 982.
- Monroe shale, Devonian, New York, Clarke, 201.
- Monroe shales, Devonian, New Jersey, Weller, 1291.
- Montana group, Cretaceous, Nebraska, Barbour, 56.
- Monte Cristo diorite, probably pre-Permian, Alaska, Mendenhall and Schrader, 880.
- Monterey, California, Lawson, 776.
- Monterey series, Miocene, California, Arnold, 38.
- Montezuma schist, Algonkian?, North Carolina, Keith, 659.
- Moreau sandstone, Ordovician, Missouri, Galaher, 429.
- Morgantown sandstone, Carboniferous, West Virginia, White, 1301.
- Morgantown sandstone, member of Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 164.
- Morita formation, Cretaceous, Arizona, Ransome, 994.
- Morrison clay, Jurassic or Lower Cretaceous Wyoming, Smith, 1138.
- Moscow shale, Devonian, New York, Clarke, 201.
- Moscow shales, included in Hamilton Devonian, New York, Cleland, 207.
- Mount Auburn bed, Cincinnati series, Ordovician, Foerste, 409.

Geologic formations described—Continued.

- Mount Pleasant conglomerate, Carboniferous, Pennsylvania, Stevenson, 1182.
- Mural limestone, Cretaceous, Arizona, Ramsome, 994.
- Myrtle formation, Cretaceous, Oregon, Diller 801.
- Nabesna limestone, Permian, Alaska, Mendenhall and Schrader, 880.
- Naco limestone, Carboniferous, Arizona, Ramsome, 994.
- Naples beds, Devonian, New York, Clarke, 201.
- Neosho limestone, Carboniferous, Kansas, Smith, 1123.
- Neva limestone, Carboniferous, Kansas, Adams, 10.
- Neva limestone, Carboniferous, Kansas, Crevecoeur, 246.
- Nevada limestone, Nevada, Spurr, 1155.
- New Albany black shale, Devonian, Indiana, Ashley, 40.
- New Albany black shale (Genesee), Devonian, Indiana, Newsom, 929.
- Newfoundland grit, Devonian, New Jersey, Weller, 1291.
- Newman limestone, Carboniferous, Virginia, Stevenson, 1182.
- New Providence shale, included in Knobstone group, Carboniferous, Indiana, Newsom, 929.
- New Scotland beds, Devonian, New Jersey, Weller, 1291.
- New Scotland beds, Devonian, New York, Van Ingen and Clark, 1240.
- New Scotland beds, Devonian, New York, Clarke, 201.
- New Scotland limestone, Devonian, Maryland, Schuchert, 1092.
- New Scotland shales, Devonian, New York, Grabau, 465.
- Niagara beds, Silurian, Indiana, Kindle, 689.
- Niagara group, Silurian, Indiana, Newsom, 929.
- Niagaragroup, Silurian, New York, Schneider, 1077.
- Niagara group, Silurian, Ohio, Prosser, 982.
- Niagara limestone, Ontario, Parks, 958.
- Niagara limestone, Silurian, Missouri, Galla-her, 429.
- Niagaran, Ontario, New York, Clarke, 201.
- Nikolai greenstone, Alaska, Schrader and Spencer, 1084.
- Nikolai greenstone, probably Carboniferous, Alaska, Mendenhall and Schrader, 880.
- Nineveh limestone, Carboniferous, West Virginia, White, 1301.
- Nineveh sandstone, Carboniferous, West Virginia, White, 1301.
- Niobrara formation, Cretaceous, Nebraska, Barbour, 56.
- Niobrara formation, Cretaceous, South Dakota, Todd, 1208-1210.
- Niobrara formation, Cretaceous, South Dakota, Todd and Hall, 1211.
- Nishnabotna stage, Cretaceous, Iowa, Udden, 1220.

Geologic formations described—Continued.

- Normanskill shale, Champlainic, New York, Clarke, 201.
- Northbridge gneiss, Massachusetts, Perry and Emerson, 971.
- Nuttall sandstone, Carboniferous, West Virginia, White, 1301.
- Oak Grove sands, Tertiary, Florida, Dall, 261.
- Oakland, California, Lawson, 776.
- Oakville beds, Neocene, Texas, Dumble, 332.
- Ocala limestone, Tertiary, Florida, Dall, 261.
- Ocoee formation, Upper Paleozoic, Alabama, Smith, 1125.
- Ogallala formation, Pliocene (?), Tertiary, Nebraska, Barbour, 56.
- Ogallala formation, Tertiary, Nebraska, Darton, 271.
- Ogden quartzite, Nevada, Spurr, 1155.
- Ogishke conglomerate, Algonkian, Minnesota, Clements, 209.
- Ohio shale, Devonian, Ohio, Claypole, 206.
- Ohio shale, Devonian, Ohio, Prosser, 982.
- Ohio River formation, post-Carboniferous (Tertiary?), Indiana, Ashley, 40.
- Oil Lake group, Devonian, Pennsylvania, Stevenson, 1182.
- Olean conglomerate, Carbonic, New York, Clarke, 201.
- Olean conglomerate, Carboniferous, New York, Glenn, 459.
- Olentangy shale, Devonian, Ohio, Prosser, 982.
- Olpe shales, Carboniferous, Kansas, Adams, 10.
- Onaga limestone, Carboniferous, Kansas, Crevecoeur, 246.
- Oneida conglomerate, Champlainic, New York, Clarke, 201.
- Oneonta beds, Devonian, New York, Clarke, 201.
- Onondaga, Ontario, Parks, 958.
- Onondaga limestone, Devonian, New Jersey, Weller, 1291.
- Onondaga limestone, Devonian, New York, Grabau, 465.
- Onondaga limestone, Devonian, New York, Schneider, 1077.
- Onondaga limestone, Devonian, New York, Van Ingen and Clark, 1240.
- Onondaga limestone, Devonian, New York, Clarke, 201.
- Onondaga limestone, Devonian, Tennessee, Foerste, 408.
- Ontario, New York, Clarke, 201.
- Oolagah limestone, Carboniferous, Indian Territory, Adams, 10.
- Opeche, Permian, Carboniferous, South Dakota, Richardson, 1015.
- Opeche formation (Permian?), Carboniferous, Wyoming, Smith, 1138.
- Orange sands, Texas, Dumble, 330.
- Orca series, Alaska, Schrader and Spence, 1084.
- Oread limestone, Carboniferous, Kansas, Adams, 10.
- Oriskany, Ontario, Parks, 958.
- Oriskany beds, Devonian, New York, Grabau, 465.
- Oriskany beds, Devonian, New York, Van Ingen and Clark, 1240.

Geologic formations described—Continued.

- Oriskany beds, Devonian, New York, Clarke, 201.
- Oriskany formation, Devonian, New Jersey, Weller, 1291.
- Oriskany formation, Devonian, Maryland, Schuchert, 1092.
- Oriskany period, Devonian, New York, Schneider, 1077.
- Oriskany sandstone, Devonian, Missouri, Gallaher, 429.
- Oriskanian, Devonian, New York, Clarke, 201.
- Osgood bed, Silurian, Kentucky and Tennessee, Foerste, 408.
- Osgood beds, Silurian, Ohio, Prosser, 982.
- Oswayo beds, Carbonic, New York, Clarke, 201.
- Oswayo beds, Carboniferous, New York, Glenn, 459.
- Oswayo formation, Devonian-Carboniferous, Pennsylvania, Fuller and Alden, 423, 424.
- Oswegan, Ontaric, New York, Clarke, 201.
- Otselie shale and sandstone, Devonian, New York, Clarke, 201.
- Ouray limestones, Devonian, Colorado, Purington, 986.
- Oxmoor, Carboniferous, Alabama, Stevenson, 1182.
- Palisade conglomerate, Tertiary, Alaska, Collier, 229.
- Paloduro beds, Miocene, Tertiary, Texas, Gidley, 440.
- Panama conglomerate, Carbonic, New York, Clarke, 201.
- Panhandle beds, Miocene, Tertiary, Texas, Gidley, 440.
- Parkville limestone, Carboniferous, Missouri, Gallaher, 429.
- Parsons limestone, Carboniferous, Kansas, Adams, 10.
- Pawhuska limestone, Carboniferous, Indian Territory, Adams, 10.
- Pawnee limestone, Carboniferous, Kansas, Adams, 10.
- Paxton schist, Massachusetts, Perry and Emerson, 971.
- Payette formation, Tertiary, Idaho, Lindgren and Drake, 806.
- Pelly gneisses, Alaska, Collier, 229.
- Pensauken, Quaternary, New York, Veatch, 1247.
- Pensauken formation, Pleistocene, New Jersey, Salisbury, 1053.
- Pennington shales, Carboniferous, Virginia, Stevenson, 1182.
- Peorian soil, Quaternary, Ohio, Prosser, 982.
- Peshastin formation, pre-Eocene, Washington, Smith, 1132.
- Pierre formation, Cretaceous, Nebraska, Barbour, 56.
- Pierre shale, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
- Pilarcitos sandstone, California, Lawson, 776.
- Pinal schists, pre-Cambrian, Arizona, Ransome, 991, 994.
- Pinole tuffs, California, Lawson, 776.
- Pit formation, Triassic, California, Diller, 302.

Geologic formations described—Continued.

- Pittsburg red shale, Carboniferous, West Virginia, White, 1301.
- Pittsburg sandstone, Carboniferous, West Virginia, White, 1301.
- Pittsford shale, Ontaric, New York, Clarke, 201.
- Pittsford shale, Silurian, New York, Hartnagel, 505.
- Placita marl, Quaternary, New Mexico, Reagan, 1003.
- Pocono, Lower Carboniferous, Appalachian region, Stevenson, 1182.
- Pocono sandstone, Carboniferous, Pennsylvania, Campbell, 164.
- Pogonip formation, Nevada, Spurr, 1155.
- Pokegama quartzite, included in Upper Huronian series, Algonkian, Minnesota, Leith, 786.
- Portage formation, Devonian, New York, Luther, 820.
- Portage formation, Devonian, New York, Clarke, 201.
- Portage sandstone, Devonian, New York, Clarke, 200.
- Portage sandstones, Devonian, New York, Luther, 820.
- Port Ewen limestone, Devonian, New York, Van Ingen and Clark, 1240.
- Port Ewen limestone, Devonian, New York, Clarke, 201.
- Port Ewen (Kingston) beds, Devonian, New York, Grabau, 465.
- Port Hudson clays, Recent, Texas, Hayes and Kennedy, 532.
- Portland shale, Devonian, New York, Clarke, 200.
- Portland shale, Devonian, New York, Clarke, 201.
- Potosi series, Colorado, Purington, 986.
- Potsdam sandstone, Cambrian, New York, Woodworth, 1351.
- Pottsville beds, Carboniferous, New York, Glenn, 459.
- Pottsville formation, Carboniferous, Ohio, Prosser, 982.
- Pottsville formation, Carboniferous, Pennsylvania, Fuller and Alden, 423.
- Pottsville conglomerate, Carboniferous, Pennsylvania and Ohio, Stevenson, 1182.
- Pottsville sandstone, Carboniferous, Pennsylvania, Campbell, 164.
- Pottsville series, Carboniferous, West Virginia, White, 1301.
- Poxino Island shale, Silurian, New Jersey, Weller, 1291.
- Prattsburg sandstone, Devonian, New York, Clarke, 201.
- Pre-Kansan drift, Quaternary, Iowa, Savage, 1071.
- Princeton limestone, Carboniferous, Kentucky, Ulrich and Smith, 1223.
- Prospect Mountain limestone and quartzite, Nevada, Spurr, 1155.
- Protean of Safford, Carboniferous, Tennessee, Stevenson, 1182.
- Puerco marls, Cretaceous, New Mexico, Reagan, 1003.

Geologic formations described—Continued.

- Pyburn limestone, subdivision of Linden bed, Devonian, Tennessee, Foerste, 408.
 Raleigh sandstone, Carboniferous, West Virginia, White, 1301.
 Rampart series, Devonian?, Alaska, Collier, 229.
 Randolph limestone, Arizona, Church, 185.
 Reagan sandstone, Cambrian, Indian Territory, Taff, 1192.
 Red Beds, Permian, New Mexico, Reagan, 1003.
 Red Beds, Texas, Oklahoma, Indian Territory and Kansas, Adams, 6.
 Redstone limestone, Carboniferous, West Virginia, White, 1301.
 Red Wall group, Upper and Lower, Arizona, Reagan, 1005.
 Red Wall limestone, Nevada, Spurr, 1155.
 Reynosa beds, Neocene, Texas, Dumble, 332.
 Reynosa limestone, Pliocene, Texas, Hayes and Kennedy, 532.
 Rhinestreet black shales, Devonian, New York, Luther, 820.
 Rhinestreet shale, Devonian, New York, Clarke, 201.
 Rhinestreet shales, Devonian, New York, Clarke, 200.
 Riceville shales, included in Chemung, Devonian, Pennsylvania, Stevenson, 1182.
 Richmond formation, Ordovician, Ohio, Prosser, 982.
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Bythocypris nearpassi n. sp., Weller, 1291.
Cadoceras crassum n. sp., Madsen, 836.
Cadulus Philippi, Arnold, 38.
nitentior Carpenter, Arnold, 38.
Cæcum Fleming, Arnold, 38.
californicum Dall, Arnold, 38.
crebricinctum Carpenter, Arnold, 38.
magnum Stearns, Arnold, 38.
Calceocrinus granuliferus n. sp., Rowley, 481.
Callianassa whiteavesii Woodward, Whiteaves, 1308.
Calliostoma Swainson, Arnold, 38.
annulatum Martyn, Arnold, 38.
canaliculatum Martyn, Arnold, 38.
costatum Martyn, Arnold, 38.
gemmulatum Carpenter, Arnold, 38.
tricolor Gabb, Arnold, 38.
Callista Poli, Arnold, 38.
 (Amiantis) *callosa* Conrad, Arnold, 38.
newcombiana Gabb, Arnold, 38.
subdiaphana Carpenter, Arnold, 38.
subdiaphana Carpenter, *pedroana*, n. var., Arnold, 38.
Callithaca Dall, Dall, 261.
Callocardia A. Adams, Dall, 261.
 (Agriopoma) *gatumensis* n. sp., Dall, 261.
gatumensis var. *multiflora* Dall, Dall, 261.
 (Agriopoma) *morhuana* Linsley, Dall, 261.
 (Agriopoma) *parkeria* Glenn, Dall, 261.
 (Agriopoma) *sayana* Conrad, Dall, 261.
 (Agriopoma) *sincera* n. sp., Dall, 261.
 (Agriopoma) *subnasuta* Conrad, Dall, 261.
Callonema filiosum n. sp., Hall, Clarke, 200.
Callopora sp. undet., Weller, 1291.
Callucina Dall, Dall, 261.
Calymene camerata Con., Weller, 1291.
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senaria Con., Weller, 1291.
Calyptogena Dall, Dall, 261.
Camarella inornata n. sp., Weller, 1291.
Cameroceus proteiforme (Hall), Weller, 1291.
Cameroceus ulrichi n. sp., Schuchert, 1091.
Camarotechia hudsonica n. sp., Grabau, 465.
indianensis Hall, Clarke and Ruedemann, 204.

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- Camarotechia metallica* White, Girty, 455.
 ? *neglecta* Hall (sp.), Clarke and Ruedemann, 204.
Campeloma harlowtonensis n. sp., Stanton, 1166.
Campodus variabilis (Newberry and Worthen), Eastman, 337.
Campophyllia in torquium (Owen), Beede, 61.
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Cancellaria Lamarck, Arnold, 38.
annosa Ald., Aldrich, 16.
bifoliata n. sp., Aldrich, 16.
cooperi Gabb, Arnold, 38.
crawfordiana Dall, Arnold, 38.
tritonidea Gabb, Arnold, 38.
Cancer Linné, Arnold, 38.
breweri Gabb, Arnold, 38.
Canis indianensis Leidy, Merriam, 883.
Capulus corrugatus (nom. prov.), Whiteaves, 1308.
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Cardiomorpha missouriensis Shumard, Beede, 61.
Cardiomya A. Adams, Dall, 261.
Cardita (Bruguière) Lamarck, Dall, 261.
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 section *Carditamera* Conrad, Dall, 261.
 section *Glans Megerle*, Dall, 261.
aldrichi n. sp., Casey, 178.
 (Carditamera) *arata* Conrad, Dall, 261.
 (Carditamera) *catharia* n. sp., Dall, 261.
 (Carditamera) *guppyi* Dall, Dall, 261.
 (Carditamera) *prestoni* n. sp., Dall, 261.
 (Carditamera) *recta* Conrad, Dall, 261.
 (Carditamera) *tegea* n. sp., Dall, 261.
 (Carditamera) *vaughani* n. sp., Dall, 261.
Carditamera Conrad, Dall, 261.
Carditella E. A. Smith, Dall, 261.
Cardites Link, Dall, 261.
Carditopsis Smith, Dall, 261.
Cardium (Linné) Lamarck, Arnold, 38.
 (Granocardium) *budense* n. sp., Shattuck, 1098.
 (Cerastoderma) *corbis* Martyn, Arnold, 38.
 (Lævicardium) *elatum* Sowerby, Arnold, 38.
 (Ringicardium) *procerum* Sowerby, Arnold, 38.
 (Trachycardium) *quadragenarium* Conrad, Arnold, 38.
 (Lævicardium) *substriatum* Conrad, Arnold, 38.
 (Protocardia) *texanum* Conrad, Shattuck, 1098.
 (Protocardia) *vaughani* n. sp., Shattuck, 1098.
Carpenteroblastus veryi n. sp., Rowley, 481.
Carpolithus cliffwoodensis n. sp., Berry, 76.
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juglandiformis n. sp., Berry, 76.
Carstenia n. gen., Hyatt, 625.
Caryophyllia arnoldi Vaughan, Arnold, 38.
californica Vaughan n. sp., Arnold, 38.
pedroensis Vaughan n. sp., Arnold, 38.

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- Catopterus J. H. Redfield, Eaton, 340.
 Cavilucina Fischer, Dall, 261.
 Celastrophylum elegans n. sp., Berry, 76.
 Centronella? biplicata n. sp., Weller, 1291.
 Centronella? subrhomboidea n. sp., Weller, 1291.
 Cerastoderma Mörch, Arnold, 38.
 Ceraurus pleurexanthemus Green, Weller, 1291.
 Ceriocrinus craigi (Worthen), Beede, 64.
 hemisphericus (Shumard), Beede, 64.
 missouriensis (Miller and Gurley), Beede, 64.
 ? monticulatus Beede, Beede, 64.
 ? priscus n. sp., Rowley, 485.
 Cerithidea Swainson, Arnold, 38.
 californica Haldemann, Arnold, 38.
 Cerithium harveyi n. sp., Whiteaves, 1308.
 ? texanum n. sp., Shattuck, 1098.
 vancouverense n. sp., Whiteaves, 1308.
 Chænocardiola Holzapfel, Clarke, 200.
 Chænomya leavenworthensis (Meek and Hayden), Beede, 64.
 leavenworthensis Meek and Hayden, Girty, 455.
 Chætetes milleporaceus Milne-Edwards and Haime, Beede, 64.
 milleporaceus Milne-Edwards and Haime, Girty, 455.
 Chama (Pliny) Linné, Arnold, 38.
 Chama (Linné) Bruguière, Dall, 261.
 caloosana n. sp., Dall, 261.
 chipolana n. sp., Dall, 261.
 congregata Conrad, Dall, 261.
 corticosa Conrad, Dall, 261.
 crassa Heilprin, Dall, 261.
 draconis n. sp., Dall, 261.
 exogyra Conrad, Arnold, 38.
 involuta Guppy, Dall, 261.
 lyelli n. sp., Dall, 261.
 macrophylla Gmelin, Dall, 261.
 mississippiensis Conrad, Dall, 261.
 monroensis n. sp., Aldrich, 16.
 pellucida Sowerby, Arnold, 38.
 striata Emmons, Dall, 261.
 tampaensis n. sp., Dall, 261.
 willcoxii Dall, Dall, 261.
 Chamelea Mörch, Dall, 261.
 Champosaurus Cope, Osborn, 948.
 Chara springeræ n. sp., Knowlton, 699.
 Cheirodus orbicularis (Newberry and Worthen), Eastman, 387.
 Chicoreus Montfort, Arnold, 38.
 Chiloceras sp., Clarke, 200.
 Chione Megerle, Arnold, 38.
 Chione Megerle von Mühlfeld, Dall, 261.
 section Chamelea Mörch, Dall, 261.
 section Chione s. s., Dall, 261.
 section Clausinella Gray, Dall, 261.
 section Gomphina Mörch s. s., Dall, 261.
 section Lirophora Conrad, Dall, 261.
 section Macridiscus Dall, Dall, 261.
 section Timoclea Brown, Dall, 261.
 ? section Volupia Defrance, Dall, 261.
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- Chione (Lirophora) alveata Conrad, Dall, 261.
 (Lirophora) ballista n. sp., Dall, 261.
 (Lirophora) burnsii Dall, Dall, 261.
 cancellata Linné, Dall, 261.
 chipolana n. sp., Dall, 261.
 corticaria Rogers, Dall, 261.
 (? Chamelea) craspedonia n. sp., Dall, 261.
 cribraria Conrad, Dall, 261.
 erosa n. sp., Dall, 261.
 (Lirophora) glyptocyma n. sp., Dall, 261.
 (Timoclea) grus Holmes, Dall, 261.
 (Lirophora) hendersonii n. sp., Dall, 261.
 (Lirophora) latilirata Conrad, Dall, 261.
 (Lirophora) mactropsis Conrad, Dall, 261.
 (Chamelea) nuciformis Heilprin, Dall, 261.
 (Chamelea) rhodia n. sp., Dall, 261.
 (Chamelea) spada n. sp., Dall, 261.
 (Lirophora) ulocyma Dall, Dall, 261.
 (Lirophora) victoria n. sp., Conrad, 261.
 (Lirophora) xesta n. sp., Dall, 261.
 sp. indet., Dall, 261.
 Chionella Cossmann, Dall, 261.
 Chiton? sp., Weller, 1291.
 Chlamys Bolten, Arnold, 38.
 Chlidonophora Dall, Dall, 261.
 Chlorostoma Swainson, Arnold, 38.
 aureotinctum Forbes, Arnold, 38.
 brunneum Philippi, Arnold, 38.
 funebræ A. Adams, Arnold, 38.
 funebræ A. A. Adams, var. subapertum Carpenter, Arnold, 38.
 gallina Forbes, Arnold, 38.
 montereyi Kiener, Arnold, 38.
 (Omphalius) viridulum var. ligulatum Menke, Arnold, 38.
 Choffaticeras n. gen., Hyatt, 625.
 Chomatodus inconstans St. John and Worthen, Eastman, 337.
 Chonetes arcuatus Hall, Weller, 1291.
 coronatus (Con.)?, Weller, 1291.
 flemingi Norwood and Pratten, Girty, 455.
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 mesolobus Norwood and Pratten, Girty, 455.
 verneuillianus Norwood and Pratten, Beede, 64.
 sp. undet., Weller, 1291.
 Chonophyllum pygmaeum n. sp., Greene, 482.
 Chonostrophia complanata (Hall), Weller, 1291.
 jervensis Schuchert, Weller, 1291.
 Chorus Gray, Arnold, 38.
 belcheri Hinds, Arnold, 38.
 Chrysallida Carpenter, Arnold, 38.

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- Chrysodomus* Swainson, Arnold, 38.
 rectirostris Carpenter, Arnold, 38.
 tabulatus Baird, Arnold, 38.
 sp. indet., Arnold, 38.
- Cidaroblastus* Hambach, 498.
 parvus n. sp., Hambach, 498.
- Cimoliasaurus* Leidy, Williston, 1325.
 snowii Williston, Williston, 1325.
- Cimolichthys* Leidy, Loomis, 808.
 contracta Cope, Loomis, 808.
 merrillii Cope, Loomis, 808.
 nepaeolica Cope, Loomis, 808.
 semianiceps Cope, Loomis, 808.
- Circe* Schumacher, Dall, 261.
- Circenita* Jousseau, Dall, 261.
- Circomphalus* Mörch, Dall, 261.
- Cladochonus?* *bennetti* Beede, Beede, 64.
- Cladodus* Agassiz, Claypole, 206.
 clarki Claypole, Claypole, 206.
 fyleri Newberry, Claypole, 206.
 kepleri Newberry, Claypole, 206.
 knightianus (Cope), Eastman, 337.
 occidentalis Leidy, Eastman, 337.
 rivi-petrosi Claypole, Claypole, 206.
 sinuatus Claypole, Claypole, 206.
- Cladopora* *multipora* Hall, Clarke and Ruedemann, 204.
 multiseriata n. sp., Weller, 1291.
 rectilineata Simpson, Weller, 1291.
 sp., Girty, 455.
- Clathrodium ostiolatum* Nicholson, Clarke and Ruedemann, 204.
- Clathrella* Carpenter, Arnold, 38.
- Clavæblastus*, Hambach, 498.
- Clavilithes columbaris* n. sp., Aldrich, 16.
- Clausina* Brown, Dall, 261.
- Clausinella* Gray, Dall, 261.
- Cleiothyris orbicularis* McChesney, Girty, 455.
- Cleiothyris roissyi* (L'Eveille), Beede, 64.
- Clementia* Gray, Dall, 261.
- Clementia grayi* Dall, 261.
- Clementia inoceriformis* Wagner, Dall, 261.
- Clemmys hesperia* n. sp., Hay, 516.
- Clemmys saxea* n. sp., Hay, 516.
- Clepsydras natalis*, Case, 176.
- Clidophora* Carpenter, Arnold, 38.
- Clidophora* Carpenter, Dall, 261.
 punctata Conrad, Arnold, 38.
- Clidophorus neglectus* Hall, Weller, 1291.
- Climacograptus phyllophorus* Gurley, Weller, 1291.
- Climactichnites*, Woodworth, 1351.
- Clintonia oblongifolia* n. sp., Penhallow, 967.
- Clypidella bimaculata* Dall, Arnold, 38.
- Callomarginata* Carpenter, Arnold, 38.
- Cochlespirella* n. gen., Casey, 178.
- Cochloidesma* Couthouy, Dall, 261.
- Codakia* Scopoli, Dall, 261.
 (*Jagonia*) *chipolana* n. sp., Dall, 261.
 (*Jagonia*) *erosa* n. sp., Dall, 261.
 (*Jagonia*) *magnoliana* n. sp., Dall, 261.
 orbicularis Linné, Dall, 261.
 (*Jagonia*) *orbiculata* Montagu, Dall, 261.
 (*Jagonia*) *pertenera* n. sp., Dall, 261.
 (*Jagonia*) *speciosa* Rogers, Dall, 261.

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- Codakia spinulosa* n. sp., Dall, 261.
 (*Jagonia*) *textilis* Guppy, Dall, 261.
 (*Jagonia*) *vendryesi* n. sp., Dall, 261.
 (*Jagonia*) sp. indet., Dall, 261.
- Codaster* Maccoy, Hambach, 498.
 attenuatus Lyon, Rowley, 481.
- Codonites* Meek and Worthen, Hambach, 498.
- Codonothea caduca* n. gen. and sp., Sellards, 1096.
- Coelacanthus exiguus* Eastman, Eastman, 337.
- Cœlidium* nom. nov., Clarke and Ruedemann, 204.
 macrospira Hall (sp.), Clarke and Ruedemann, 204.
 cf. *vitellia* Billings, Clarke and Ruedemann, 204.
- Cœlocystis* n. gen., Schuchert, 1091.
- Cœlodon* Carpenter, Dall, 261.
- Cœlodus brownii* Cope, Williston, 1330.
 stantoni n. sp., Williston, 1330.
- Cœloma bicarinatum* n. sp., Ravn, 996.
- Cœnograptus gracilis* (Hall), Weller, 1291.
- Cœlopoceras* n. gen., Hyatt, 625.
 colleti n. sp., Hyatt, 625.
 novimexicanum n. sp., Hyatt, 625.
 springeri n. sp., Hyatt, 625.
- Columbella* Lamarck, Arnold, 38.
 (*Astyris*) *californiana* Gaskoin, Arnold, 38.
 (*Æsopus*) *chrysalloidea* Carpenter, Arnold, 38.
 (*Astyris*) *gausapata* Gould, Arnold, 38.
 (*Astyris*) *gausapata* Gould, var. *carinata* Hinds, Arnold, 38.
 (*Anachis*) *minima* n. sp., Arnold, 38.
 (*Æsopus*) *oldroydi* n. sp., Arnold, 38.
 solidula Reeve, var. *præcursor* n. var. Arnold, 38.
 (*Astyris*) *tuberosa* Carpenter, Arnold, 38.
- Columnaria alveolata* Goldfuss, Hayes and Ulrich, 533.
 halli Nicholson, Hayes and Ulrich, 533.
- Condylocardia* Bernard, Dall, 261.
- Confervites dubius* n. sp., Berry, 75.
- Conocardium eboraceum* Hall, mut. *pygmæum* nov., Loomis, 809.
 gowandense n. sp., Clarke, 200.
 parrishi Worthen, Beede, 64.
 sp., Clarke and Ruedemann, 204.
 sp., Girty, 455.
 sp. undet., Weller, 1291.
- Constellaria florida* var. *emaciata* Ulrich and Bassler, Hayes and Ulrich, 533.
 teres Ulrich and Bassler, Hayes and Ulrich, 533.
- Conularia crustula* White?, Girty, 455.
 trentonensis Hall, Weller, 1291.
- Conus* Linné, Arnold, 38.
 californicus Hinds, Arnold, 38.
 scopularis n. sp., Casey, 178.
 waltonensis n. sp., Aldrich, 17.
- Cooperella* Carpenter, Arnold, 38.
 subdiaphana Carpenter, Arnold, 38.
- Coralliophaga coralliophaga* Gmelin, Dall, 261.
 elegantula Dall, Dall, 261.

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- Coralliophila* H. and A. Adams, Arnold, 38.
nux Reeve, Arnold, 38.
Corax curvatus n. sp., Williston, 1330.
falcatus Agassiz, Williston, 1330.
Corbicula Megerle, Dall, 261.
 section *Corbiculina* Dall, Dall, 261.
 section *Cyrenodonax* Dall, Dall, 261.
 section *Tellinocyclas* Dall, Dall, 261.
 section *Veloritina* Meek, Dall, 261.
densata Conrad, Dall, 261.
Corbiculina Dall, Dall, 261.
Corbis Cuvier, Dall, 261.
claibornensis Dall, Dall, 261.
undata Conrad, Dall, 261.
Corbula (Bruguière) Lamarck, Arnold, 38.
laqueata n. sp., Casey, 178.
luteola Carpenter, Arnold, 38.
nematophora var. *fitchi* n. var., Johnson, 647.
Corneocyclas (Ferussac), Dall, 261.
 section *Corneocyclas* s. s., Dall, 261.
 section *Cyclocalyx* Dall, Dall, 261.
 section *Phymesoda* Rafinesque, Dall, 261.
 section *Pisidium* C. Pfeiffer, Dall, 261.
Cornulites arcuatus Conrad, Clarke and Ruedemann, 204.
cingulatus Hall, Weller, 1291.
 sp. undet., Weller, 1291.
Corynoides calicularis Nich., Weller, 1291.
Cossmannella Mayer Eymar, Dall, 261.
Cranana subelliptica var. *hardingensis* n. var., Girty, 455.
Crania? *columbiana* Walcott, Matthew, 857.
modesta White and St. John, Beede, 64.
 sp., Clarke and Ruedemann, 204.
 sp. undet., Weller, 1291.
Crassinella Bayle, Arnold, 38.
Crassinella Guppy, Dall, 261.
Crassatellites Krüger, Dall, 261.
 section *Crassatellites* s. s., Dall, 261.
 section *Scambula* Conrad, Dall, 261.
(Crassinella) acutus n. sp., Dall, 261.
(Crassinella) bowdenensis n. sp., Dall, 261.
(Scambula) chipolanus n. sp.?, Dall, 261.
clarkensis Dall, Dall, 261.
(Scambula) deformis Heilprin, Dall, 261.
(Scambula) densus Dall, Dall, 261.
(Crassinella) duplinianus n. sp., Dall, 261.
(Crassinella) galvestonensis, Harris, Dall, 261.
(Scambula) gibbesii Tuomey and Holmes, Dall, 261.
(Scambula) jamaicensis n. sp., Dall, 261.
(Crassinella) lunulatus Conrad, Dall, 261.
(Scambula) marylandicus Conrad, Dall, 261.
(Scambula) melinus Conrad var. *meridionalis* Dall, Dall, 261.
(Micromeris) minutissimus Lea, Dall, 261.
(Cuna) parvus Lea, Dall, 261.
(Scambula) psychopterus Dall, Dall, 261.
(Crassinella) tanicus n. sp., Dall, 261.
(Crassinella) triangulatus n. sp., Dall, 261.
undulatus var. *cyclopterus* Dall, Dall, 261.

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- Crenimargo*, Cossmann, Dall, 261.
Crenipecten hallanus Walcott, Girty, 455.
Creosaurus, Osborn, 947.
Crepidula Lamarck, Arnold, 38.
aculeata Gmelin, Arnold, 38.
adunca Sowerby, Arnold, 38.
dorsata Broderip, Arnold, 38.
grandis Middendorff, Arnold, 38.
navicelloides Nuttall, Arnold, 38.
onyx Sowerby, Arnold, 38.
rugosa Nuttall, Arnold, 38.
Cribroblastus, Hambach, 498.
incisus n. sp., Hambach, 498.
schucherti n. sp., Hambach, 498.
tenuis n. sp., Hambach, 498.
tenuistriatus n. sp., Hambach, 498.
verrucosus n. sp., Hambach, 498.
Crucibulum Schumacher, Arnold, 38.
spinosum, Sowerby, Arnold, 38.
Cryphaeus boothi var. *calliteles* Green, Loomis, 809.
Cryptochiton Midd. & Gray, Arnold, 38.
stelleri Middendorff, Arnold, 38.
Cryptodon cfr. *unicarinatus* Nyst. sp., Ravn, 996.
Cryptomya Conrad, Arnold, 38.
californica Conrad, Arnold, 38.
Cryptonatica Dall, Arnold, 38.
Ctenacanthus amblyxiphias Cope, Eastman, 337.
Ctenichnites bisulcatus n. sp., Matthew, 858.
Ctenodonta jerseyensis n. sp., Weller, 1291.
levata (Hall), Weller, 1291.
nasuta (Hall), Weller, 1291.
subrotunda Ulrich, Hayes and Ulrich, 533.
Ctenopteris columbensis n. sp., Penhallow, 967.
Ctenoptychius occidentalis (St. John and Worthen), Eastman, 337.
Ctenopyge pecten Salter, Matthew, 858.
Cucullæa truncata? Gabb, var., Whiteaves, 1308.
Cucullæa sp., Shattuck, 1098.
Cumingia Sowerby, Arnold, 38.
californica Conrad, Arnold, 38.
Cuna Hedley, Dall, 261.
Cuneamya truncatula Ulr., Weller, 1291.
Cunninghamites squamosus Heer, Berry, 76.
Cupressoxylon dawsoni n. sp., Penhallow, 968.
Cursipes n. gen., Matthew, 859.
dawsoni n. sp., Matthew, 859.
Cuspidaria Nardo, Dall, 261.
(Cardiomya) craspedonia n. sp., Dall, 261.
(Bowdenia) distira n. sp., Dall, 261.
(Cardiomya) ornatissima Orbigny, Dall, 261.
suciensis n. sp., Whiteaves, 1308.
Cyanocyclas Ferussac, Dall, 261.
Cyathodonta Conrad, Dall, 261.
guadalupensis n. sp., Dall, 261.
semirugosa Reeve, Dall, 261.
spenceri n. sp., Dall, 261.
vicksburgiana n. sp., Dall, 261.
Cycadites sp., Penhallow, 967.

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- Cyclas* (Brugulère) Link, Dall, 261.
Cyclina Deshayes, Dall, 261.
Cyclinella Dall, Dall, 261.
 cyclica Guppy, Dall, 261.
 gatumensis n. sp., Dall, 261.
 tenuis Récluz, Dall, 261.
Cyclocalyx Dall, Dall, 261.
Cyclocardia Conrad, Dall, 261.
Cyclonema montrealensis Bill., Weller, 1291.
 varicosum Hall, Hayes and Ulrich, 533.
Cyclotrypa Ulrich, Condra, 238.
 ? *barberi* Ulrich, Condra, 238.
Cylicina Loven, Arnold, 38.
 alba Brown, Arnold, 38.
 costata Gabb, Whiteaves, 1308.
Cylindrodon fontis Douglas, Matthew, 863.
Cymatocyclus Dall, Dall, 261.
Cymbophora ashburneri Gabb, Whiteaves, 1308.
Cynodictis paterculus n. sp., Matthew, 863.
Cynognathus, Case, 176.
Cyphaspis trentonensis n. sp., Weller, 1291.
Cyprea Linné, Arnold, 38.
 nuculoides n. sp., Aldrich, 16.
 spadicea Gray, Arnold, 38.
 suciensis Whiteaves, Whiteaves, 1308.
 sp., Shattuck, 1098.
Cypricardinia? *carbonaria* Meek, Beede, 64.
 carbonaria Meek, Girty, 455.
 sublamellosa Hall, Weller, 1291.
Cyprimeria Conrad, Dall, 261.
 lens Whiteaves, Whiteaves, 1308.
 ? *sulcata* n. sp., Johnson, 647.
Cyprina? *anthracicola* n. sp., Whiteaves, 1308.
 denmanensis n. sp., Whiteaves, 1308.
 sp., Ravn, 996.
Cyrena Lamarck, Dall, 261.
 section *Cyrena* s. s., Dall, 261.
 section *Egetaria* Mörch, Dall, 261.
 section *Geloina* Gray, Dall, 261.
 section *Isodoma* (Deshayes) Cossmann, Dall, 261.
 section *Polymesoda* Rafinesque, Dall, 261.
 albertensis n. sp., Whiteaves, 1302.
 (*Pseudocyrena*) *dupliniana* n. sp., Dall, 261.
 (*Pseudocyrena*) *floridana* Conrad, Dall, 261.
 gravesi Deshayes, Ravn, 996.
 pompholyx Dall, Dall, 261.
Cyrenastrum Bourguignat, Dall, 261.
Cyrenodonax Dall, Dall, 261.
Cyrenoida Joannis, Dall, 261.
 caloosauensis Dall, Dall, 261.
Cyrtina hamiltonensis Hall, Weller, 1291.
 hamiltonensis Hall, mut. *pygmæa* nov., Loomis, 809.
 magnaplicata n. sp., Weller, 1291.
 rostrata Hall, Weller, 1291.
 varia Clarke, Weller, 1291.
 sp. undet., Weller, 1291.
Cyrtoceras arcticameratum Hall, Clarke and Ruedemann, 204.
 bovinum n. sp., Clarke and Ruedemann, 204.

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- Cyrtoceras* cf. *brevicorne* Hall, Clarke and Ruedemann, 204.
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Cyrtolites ornatus var. *minor* U. & S., Weller, 1291.
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 (*Artena*) *glyptoconcha* n. sp., Dall, 261.
 (*Artena*) *shepardi* n. sp., Dall, 261.
 (*Artena*) *staminea* Conrad, Dall, 261.
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 zephyrinum n. sp., Casey, 178.
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- Derbya Waagen, Beede, 64.
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- Desmoceras selwynianum Whiteaves, Whiteaves, 1308.
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- Diaphorostoma lineatum Conrad, mut. belial Clarke, Loomis, 809.
- Diaphorostoma niagarense Hall (sp.), Clarke and Ruedemann, 204.
 pugnus n. sp., Clarke, 200.
 (Naticopsis) rotundatum n. sp., Clarke, 200.
- Diastoma Deshayes, Arnold, 38.
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- Diatrypa gigantea, Lucas, 814.
- Dichocrinus inornatus Wachsmuth and Springer, Grabau, 464.
- Dicranograptus ramosus (Hall), Weller, 1291.
- Dielasma bovidens (Morton), Beede, 64.
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- Digitaria Wood, Dall, 261.
- Dikelocephalus newtonensis n. sp., Weller, 1291.
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- Dimorphoceras Hyatt, Smith, 1137.
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- Dinocyon ossifragus n. sp., Douglass, 317.
- Dinorthis pectinella (Emm.), Weller, 1291.
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- Diopseus leptocephalus, Case, 176.
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- Diplodocus, Hatcher, 508.
- Diplodonta Brown, Arnold, 38.
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 serricata Reeve, Arnold, 38.
- Diplograptus angustifolius (Hall), Weller, 1291.
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- Diplomoceras notabile n. sp., Whiteaves, 1308.
- Diplophyllum cæspitosum Hall, Clarke and Ruedemann, 204.
- Disciniscia lugubris Conrad, Dall, 261.
- Discosaurus Leidy, Williston, 1325.
- Ditypodon Sandberger, Dall, 261.
- Divaricella von Martens, Dall, 261.
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 excavatus W. & S., Rowley, 482.
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 excavatus var. incarinatus n. var., Rowley, 481.
 fungiferus n. sp., Rowley, 482.
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 spinosus M. & G., Rowley, 485.
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- Doleropteris pennsylvanica Dn. sp., White, 1296.
- Dolichorhynchops Williston, Williston, 1325.
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- Dolichotoma Bellardi, Arnold, 38.
- Donacopsis Sandberger, Dall, 261.
- Donax (Linné) Lamarck, Arnold, 38.
 californica Conrad, Arnold, 38.
 lævigata Deshayes, Arnold, 38.
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- Dosinia Scopoli, Arnold, 38.
- Dosinia Scopoli, Dall, 261.
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 montereyensis Stearns, Arnold, 38.
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 Dromopus celer, n. sp., Matthew, 861.
 Dryptosaurus incrassatus (Cope), Lambe, 751.
 Dystactospongia minor Ulrich, Hayes and Ulrich, 533.
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 peculiaris (Con.), Weller, 1291.
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 Ecyliomphalus contiguus Ulrich, Weller, 1291.
 subelliptica n. sp., Weller, 1291.
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 Echinochama Fischer, Dall, 261.
 antiquata n. sp., Dall, 261.
 arcinella Linné, Dall, 261.
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 aspinwallensis Meek, Beede, 64.
 ? deckerensis n. sp., Weller, 1291.
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 nebrascensis (Geinitz), Beede, 64.
 subtruncata Meek, Girty, 455.
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 dolichus Cope, Stewart, 1186.
 ferox Leidy, Hay, 517.
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 petrosus Cope, Hay, 517.
 petrosus Cope, Loomis, 808.
 petrosus Cope, Stewart, 1186.
 sævus n. sp., Hay, 517.
 shumardi Leidy, Loomis, 808.
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 tetræcus Cope, Hay, 517.
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 pierenale var. commune, Hyatt, 625.
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 Entodesma Philippi, Dall, 261.
 Entolium aviculatum (Swallow), Beede, 64.
 Entomis procephala nov., Loomis, 809.
 serratostrata Sandberger, Clarke, 200.
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 Eoobolus n. subg., Matthew, 858.
 Eotomaria arcyi n. sp., Clarke and Ruedemann, 204.
 durhamensis Whiteaves (sp.), Clarke and Ruedemann, 204.
 galtensis Billings (sp.), Clarke and Ruedemann, 204.
 kayseri n. sp., Clarke and Ruedemann, 204.
 Epilucina Dall, Dall, 261.
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 Equisetum arcticum Heer, Penhallow, 967.
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Erisocrinus megalobranchius Beede, Beede, 64.
typus Meek and Worthen, Beede, 64.
Erycina sp., Ravn, 996.
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 (*Carditopsis*) *bernardi* n. sp., Dall, 261.
 ovalis Conrad, Dall, 261.
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 latus n. sp., Case, 175.
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Escharopora siluriana n. sp., Weller, 1291.
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 ? *ingens*, Matthew, 858.
 rutellum, Matthew, 858.
 ? *vetus*, Matthew, 858.
Etoblattina mazona, Sellards, 1095.
 sp., Sellards, 1095.
Eucallista Dall, Dall, 261.
Eucalyptocrinus ovalis Hall, Grabau, 464.
Eucalyptus (?) *dubia* n. sp., Berry, 76.
 gelnitz Heer, Berry, 76.
Euconispira bicarinata McChesney, Girty, 455.
 taggarti Meek, Girty, 455.
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Eulima Risso, Arnold, 38.
 falcata Carpenter, Arnold, 38.
 hastata Sowerby, Arnold, 38.
 micans Carpenter, Arnold, 38.
Eulopia Dall, Dall, 261.
Eulophoceras n. gen., Hyatt, 625.
Euloxa Conrad, Dall, 261.
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Eumetria marcyi Shumard ?, Girty, 455.
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Eunema cretaceum Whiteaves, Whiteaves, 1308.
Euomphalus catilloides Conrad, Girty, 455.
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Eupachyrinus magister Miller and Gurley, Beede, 64.
Eupera Bourguignat, Dall, 261.
Euphemus nodocarinatus Hall, Girty, 455.
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Eupleura H. and A. Adams, Arnold, 38.
 muriciformis Broderip, Arnold, 38.
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Eurychilina jerseyensis n. sp., Weller, 1291.
 oculifera n. sp., Weller, 1291.
Eurypterus pittsfordensis n. sp., Sarle, 1070.
Euthydesma Hall, Clarke, 200.
 subtextile Hall, Clarke, 200.
Eutivela Dall, Dall, 261.
Evalea A. Adams, Arnold, 38.
Exogyra clarki n. sp., Shattuck, 1098.
Favosites corrugatus n. sp., Weller, 1291.
 favosus, Hayes and Ulrich, 533.
 forbesi Edwards and Haime, Clarke and Ruedemann, 204.
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- Favosites helderbergiae* Hall, Weller, 1291.
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 cyclofenestrata Condra, Condra, 238.
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 kansasensis Rogers, Condra, 238.
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 woolsoni Newb., Berry, 76.
Fissodus St. John and Worthen, Eastman, 337.
 dentatus n. sp., Eastman, 337.
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Fissurella volcano Reeve, Arnold, 38.
Fissuridea Swainson, Arnold, 38.
 aspera Eschscholtz, Arnold, 38.
 inequalis Sowerby, Arnold, 38.
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 murina (Carpenter) Dall, Arnold, 38.
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Fossarus Philippi, Arnold, 38.
 (*Isapis*) *fenestrata* Carpenter, Arnold, 38.
Fusulina cylindrica Fischer de Waldheim, Girty, 455.
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Fusus Lamarck, Arnold, 38.
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 mississippiensis Conrad, Casey, 178.
 robustus Trask, Arnold, 38.
 rugosus Trask, Arnold, 38.
 texanus n. sp., Shattuck, 1098.
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Gadinia Gray, Arnold, 38.
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galeata (Dal.), Weller, 1291.
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Gyroceras farcimen n. sp., Clarke and Ruedemann, 204.
Gyrodos (conradiana ? Gabb, var.) *canadensis*, Whiteaves, 1308.
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Haliotis Linné, Arnold, 38.
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Halonympha Dall and Smith, Dall, 261.
Halysites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
agglomeratus Hall, Whitfield, 1310.
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radiatus n. sp., Whitfield, 1310.
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Haplocanthus priscus n. gen. and sp., Hatcher, 511.
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Harpina ottawensis (Bill.), Weller, 1291.
Harrisia parabola Cleland, Cleland, 208.
Hauericeras gardeni (Bailey), Whiteaves, 1308.
Hebertella borealis Billings, Hayes and Ulrich, 533.
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Helcion giganteus ? var. *vancouverensis*, Whiteaves, 1308.
tenuicostatus n. sp., Whiteaves, 1308.
Helicoceras pariense White ? , Johnson, 647.
Heliophyllum conglomeratum n. sp., Greene, 484.
congregatum n. sp., Greene, 484.
convergens (Hall), Greene, 483.
crotalum n. sp., Greene, 481.
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vesiculatum (Hall), Greene, 485.
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Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
Helodus incisus n. sp., Eastman, 337.
rugosus Newberry and Worthen, Eastman, 337.
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Hesperhys n. gen., Douglass, 317.
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Hindia fibrosa (Roemer), Weller, 1291.
nodulosa Whiteaves, 1308.
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Hipparionyx proximus (Van.), Weller, 1291.
Hipponyx De France, Arnold, 38.
antiquatus Linnæus, Arnold, 38.
cranioides Carpenter, Arnold, 38.
tumens Carpenter, Arnold, 38.
Holasaphus, Matthew, 858.
centropyge, Matthew, 858.
Holocystis papulosus ? M. & G., Rowley, 485.
Holopea antiqua (Van.), Weller, 1291.
parvula Ulrich, Weller, 1291.
? raymondia n. sp., Cleland, 208.
supraplana U. & S. ?, Weller, 1291.
symmetrica Hall, Weller, 1291.
? voluta n. sp., Cleland, 208.
Homacanthus Agassiz, Eastman, 337.
acinaciformis n. sp., Eastman, 337.
delicatulus n. sp., Eastman, 337.
Homalonotus vanuxemi Hall, Weller, 1291.
Homomya austiniensis n. sp., Shattuck, 1098.
vulgaris n. sp., Shattuck, 1098.
Homotrypa Ulrich, Bassler, 60.
austini n. sp., Bassler, 60.
bassleri Nickles, Bassler, 60.
cincinnatiensis n. sp., Bassler, 60.
communis n. sp., Bassler, 60.
curvata Ulrich, Bassler, 60.
curvata var. *præcepta* n. var., Bassler, 60.
cylindrica n. sp., Bassler, 60.
dawsoni (Nicholson), Bassler, 60.
dumosa n. sp., Bassler, 60.
fiabellaris Ulrich, Bassler, 60.
fiabellaris var. *spinifera* n. var., Bassler, 60.
frondosa n. sp., Bassler, 60.
gelasinosa Ulrich, Bassler, 60.
grandis n. sp., Bassler, 60.
libana n. sp., Bassler, 60.
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nodulosa n. sp., Bassler, 60.
nitida n. sp., Bassler, 60.
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ramulosa n. sp., Bassler, 60.
richmondensis n. sp., Bassler, 60.
splendens n. sp., Bassler, 60.
wortheni (James), Bassler, 60.
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desmata n. sp., Clarke, 200.
erinacea n. sp., Clarke, 200.
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 ? section Radiocrista Dall, Dall, 261.
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 (Gouldia) erosum n. sp., Dall, 261.
 (Gouldia) metastriatum Conrad, Dall, 261.
 Galerus Humphrey, Arnold, 38.
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 Galesaurus, Case, 176.
 Gastrioceras Hyatt, Smith, 1137.
 branneri Smith, Smith, 1137.
 carbonarium von Buch, Smith, 1137.
 compressum Hyatt, Smith, 1137.
 entogonum Gabb, Smith, 1137.
 excelsum Meek, Smith, 1137.
 globulosum Meek and Worthen, Smith, 1137.
 illinoiense Miller and Gurley, Smith, 1137.
 kansasense Miller and Gurley, Smith, 1137.
 kingi Hall and Whitfield, Smith, 1137.
 listeri Martin, Smith, 1137.
 montgomeryense Miller and Gurley, Smith, 1137.
 nolinense Cox, Smith, 1137.
 occidentale Miller and Faber, Smith, 1137.
 planorbiforme Shumard, Smith, 1137.
 subcavum Miller and Gurley, Smith, 1137.
 welleri n. sp., Smith, 1137.
 Gastrochæna striatula n. sp., Aldrich, 17.
 Geinitzia formosa Heer, Berry, 76.
 Geloia Gray, Dall, 261.
 Gemma Deshayes, Dall, 261.
 gemma Totten, Dall, 261.
 gemma var. purpurea Lea, Dall, 261.
 magna n. sp., Dall, 261.
 magna var. virginiana Dall, Dall, 261.
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 Gennæocrinus comptus n. sp., Rowley, 480.
 comptus var. spiniferus n. var., Rowley, 480.
 facetus n. sp., Rowley, 480.
 kentuckiensis ? Shumard ?, Rowley, 480.
 sculptus n. sp., Rowley, 480.
 Gephyroceras cf. domanicense Holzapfel, Clarke, 200.
 Gerhardtia n. gen., Hyatt, 625.
 Gervilliois invaginata (?) White, Shattuck, 1098.
 Gillicus Hay, Hay, 517.
 Hay, Stewart, 1186.
 arcuatus (Cope), Stewart, 1186.
 Ginkgo pusilla Dn., Penhallow, 967.
 Glans Megerle, Dall, 261.
 Gleichenia delicatula Heer, Hollick, 591.
 rhombifolia n. sp., Hollick, 591.
 saundersi n. sp., Berry, 75.
 Globoblastus, Hambach, 498.
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- Globoblastus ornatus n. sp., Hambach, 498.
 spathatus n. sp., Hambach, 498.
 Glossina spatiosa (Hall) ?, Weller, 1291.
 Glottidia Dall, Arnold, 38.
 albida Hinds, Arnold, 38.
 Glycymeris Da Costa, Arnold, 38.
 barbata Conrad, Arnold, 38.
 septentrionalis Middendorf, Arnold, 38.
 Glyphæa n. sp., Whiteaves, 1308.
 Glyptioceras Hyatt (emend. Haug), Smith, 1137.
 calyx Phillips, Smith, 1137.
 diadema Goldfuss, Smith, 1137.
 ? hathawayanum McChesney, Smith, 1137.
 ? leviculum Miller and Faber, Smith, 1137.
 pygmæum Winchell, Smith, 1137.
 Glyptocrinus decadactylus Hall, Hayes and Ulrich, 533.
 Glyptotherium texanum n. gen. and sp., Osborn, 945.
 Gomphina Mörch, Dall, 261.
 Gomphognathus, Case, 176.
 Goniatites de Haan, Smith, 1137.
 choctawensis Shumard, Smith, 1137.
 ? colubrellus Morton, Smith, 1137.
 crenistria Phillips, Smith, 1137.
 greencastlensis Miller and Gurley, Smith, 1137.
 kentuckiensis Miller, Smith, 1137.
 lunatus Miller and Gurley, Smith, 1137.
 ? minimus Shumard, Smith, 1137.
 newsomi n. sp., Smith, 1137.
 ? parvus Shumard, Smith, 1137.
 ? politus Shumard, Smith, 1137.
 sphaericus Martin, Smith, 1137.
 striatus Sowerby, Smith, 1137.
 subcircularis Miller, Smith, 1137.
 Goniobasis ? ortmanni n. sp., Stanton, 1166.
 ? silberlingi n. sp., Stanton, 1166.
 Gonilia Stoliczka, Dall, 261.
 Gonioloboceras ? allei Winchell, Smith, 1137.
 goniolobum Meek, Smith, 1137.
 ? limatum Miller and Faber, Smith, 1137.
 welleri n. sp., Smith, 1137.
 Goniophora carinatus (Hall), Weller, 1291.
 sp. undet., Weller, 1291.
 Goodallia Turton, Dall, 261.
 Gouldia C. B. Adams, Dall, 261.
 Gradilucina Cossmann, Dall, 261.
 Grammysia constricta Hall, mut. pygmæa nov., Loomis, 809.
 sp. undet., Weller, 1291.
 Grateloupia Desmoulin, Dall, 261.
 (Cytheriopsis) aluminensis n. sp., Dall, 261.
 Granatocrinites mihi, n. gen., Troost, Hambach, 498.
 cidariformis mihi, Troost, Hambach, 498.
 globosus mihi, Troost, Hambach, 498.
 Gresslya abducta Phillips sp., Madsen, 836.
 gregaria (Zieten) Goldfuss sp., Madsen, 836.
 peregrina Phillips sp., Madsen, 836.
 Gryphæa mucronata Gabb, Shattuck, 1098.
 vesicularis Lamarck, Whiteaves, 1308.
 Gymnoptychus minimus n. sp., Matthew, 863.
 minor (Douglas), Matthew, 863.

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Genera and species described—Continued.

- Gypidula angulata* n. sp., Weller, 1291.
galeata (Dal.), Weller, 1291.
galeata (Dal.) var., Weller, 1291.
Gyroceras farcimen n. sp., Clarke and Ruedemann, 204.
Gyrodus (conradiana? Gabb, var.) canadensis, Whiteaves, 1308.
Hadrocrinus plenissimus Lyon, Rowley, 485.
Haliotis Linné, Arnold, 38.
fulgens Philippi, Arnold, 38.
Halonympha Dall and Smith, Dall, 261.
Halysites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
agglomeratus Hall, Whitfield, 1310.
catenulatus, Hayes and Ulrich, 533.
catenularia (Linn.), Weller, 1291.
catenulatus Linn., Whitfield, 1310.
catenularius Linne (sp.), Clarke and Ruedemann, 204.
radiatus n. sp., Whitfield, 1310.
Haminea Leach, Arnold, 38.
virescens Sowerby, Arnold, 38.
obstrictus Jimbo, Whiteaves, 1308.
Haplocanthosaurus, Hatcher, 507.
priscus, Hatcher, 507.
utterbachi n. sp., Hatcher, 507.
Haplocanthus priscus n. gen. and sp., Hatcher, 511.
Hargeria n. gen., Lucas, 814.
gracilis, Lucas, 814.
Harpagodes shumardi (Hill), Shattuck, 1098.
Harpina ottawensis (Bill.), Weller, 1291.
Harrisia parabola Cleland, Cleland, 208.
Hauericeras gardeni (Baily), Whiteaves, 1308.
Hebertella borealis Billings, Hayes and Ulrich, 533.
sinuata Hall, Hayes and Ulrich, 533.
Helcion giganteus? var. *vancouverensis*, Whiteaves, 1308.
tenuicostatus n. sp., Whiteaves, 1308.
Helicoceras pariense White?, Johnson, 647.
Heliophyllum conglomeratum n. sp., Greene, 484.
congregatum n. sp., Greene, 484.
convergens (Hall), Greene, 483.
crotalum n. sp., Greene, 481.
dispansum n. sp., Greene, 481.
mirum n. sp., Greene, 481.
vesiculatum (Hall), Greene, 485.
zenkeri (Billings), Greene, 483.
Helix (Epiphragmophora) sp. indet., Arnold, 38.
Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
Helodus incisus n. sp., Eastman, 337.
rugosus Newberry and Worthen, Eastman, 337.
Hemitapes Römer, Dall, 261.
Heptodon?, Douglass, 317.
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Hesperhys n. gen., Douglass, 317.
vagrans n. sp., Douglass, 317.
Hesperornis gracilis, Lucas, 814.
regalis, Lucas, 814, 815.
Heteroceras elongatum n. sp., Whiteaves, 1308.
hornbyense Whiteaves, Whiteaves, 1308.

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Genera and species described—Continued.

- Heteroclidus* n. subg., Dall, Dall, 261.
Heterotrypa parvulipora Ulrich and Bassler, Hayes and Ulrich, 533.
Hindia fibrosa (Roemer), Weller, 1291.
nodulosa Whiteaves, 1308.
parva Ulrich, Weller, 1291.
Hinnites Defrance, Arnold, 38.
Hipparionyx proximus (Van.), Weller, 1291.
Iiipponyx De France, Arnold, 38.
antiquatus Linnæus, Arnold, 38.
cranioides Carpenter, Arnold, 38.
tumens Carpenter, Arnold, 38.
Holasaphus, Matthew, 858
centropyge, Matthew, 858.
Holocystis papulosus? M. & G., Rowley, 485.
Holopea antiqua (Van.), Weller, 1291.
parvula Ulrich, Weller, 1291.
? raymondia n. sp., Cleland, 208.
supraplana U. & S.?, Weller, 1291.
symmetrica Hall, Weller, 1291.
? voluta n. sp., Cleland, 208.
Homacanthus Agassiz, Eastman, 337.
acinaciformis n. sp., Eastman, 337.
delicatulus n. sp., Eastman, 337.
Homalonotus vanuxemi Hall, Weller, 1291.
Homomya austinensis n. sp., Shattuck, 1098.
vulgaris n. sp., Shattuck, 1098.
Homotrypa Ulrich, Bassler, 60.
austini n. sp., Bassler, 60.
bassleri Nickles, Bassler, 60.
cincinnatensis n. sp., Bassler, 60.
communis n. sp., Bassler, 60.
curvata Ulrich, Bassler, 60.
curvata var. *præcepta* n. var., Bassler, 60.
cylindrica n. sp., Bassler, 60.
dawsoni (Nicholson), Bassler, 60.
dumosa n. sp., Bassler, 60.
fiabellaris Ulrich, Bassler, 60.
fiabellaris var. *spinifera* n. var., Bassler, 60.
frondosa n. sp., Bassler, 60.
gelasinosa Ulrich, Bassler, 60.
grandis n. sp., Bassler, 60.
libana n. sp., Bassler, 60.
nicklesi n. sp., Bassler, 60.
nodulosa n. sp., Bassler, 60.
nitida n. sp., Bassler, 60.
obliqua Ulrich, Bassler, 60.
pulchra n. sp., Bassler, 60.
ramulosa n. sp., Bassler, 60.
richmondensis n. sp., Bassler, 60.
splendens n. sp., Bassler, 60.
wortheni (James), Bassler, 60.
wortheni var. *intercellata* n. var., Bassler, 60.
wortheni var. *prominens* n. var., Bassler, 60.
Homotrypella nodosa Ulrich and Bassler, Hayes and Ulrich, 533.
Honeoyea n. gen., Clarke, 200.
desmata n. sp., Clarke, 200.
erinacea n. sp., Clarke, 200.
major n. sp., Clarke, 200.
simplex n. sp., Clarke, 200.
styliophila n. sp., Clarke, 200.
Hoploparia bennettii Woodward, Whiteaves, 1308.

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- Gafrarium* Bolten, Dall, 261.
 section *Circe* Schumacher, Dall, 261.
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 section *Gouldia* C. B. Adams, Dall, 261.
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 ? section *Radiocrista* Dall, Dall, 261.
 (*Gouldia*) *altum* n. sp., Dall, 261.
 (*Gouldia*) *erosum* n. sp., Dall, 261.
 (*Gouldia*) *metastriatum* Conrad, Dall, 261.
Galerus Humphrey, Arnold, 38.
mammillaris Broderip, Arnold, 38.
Galesaurus, Case, 176.
Gastrioceras Hyatt, Smith, 1137.
branneri Smith, Smith, 1137.
carbonarium von Buch, Smith, 1137.
compressum Hyatt, Smith, 1137.
entogonum Gabb, Smith, 1137.
excelsum Meek, Smith, 1137.
globulosum Meek and Worthen, Smith, 1137.
illinoisense Miller and Gurley, Smith, 1137.
kansasense Miller and Gurley, Smith, 1137.
kingi Hall and Whitfield, Smith, 1137.
listeri Martin, Smith, 1137.
montgomeryense Miller and Gurley, Smith, 1137.
nolinense Cox, Smith, 1137.
occidentale Miller and Faber, Smith, 1137.
planorbiforme Shumard, Smith, 1137.
subcavum Miller and Gurley, Smith, 1137.
welleri n. sp., Smith, 1137.
Gastrochana striatula n. sp., Aldrich, 17.
Geinitzia formosa Heer, Berry, 76.
Geloina Gray, Dall, 261.
Gemma Deshayes, Dall, 261.
gemma Totten, Dall, 261.
gemma var. *purpurea* Lea, Dall, 261.
magna n. sp., Dall, 261.
magna var. *virginiana* Dall, Dall, 261.
trigona n. sp., Dall, 261.
Gennæocrinus comptus n. sp., Rowley, 480.
comptus var. *spiniferus* n. var., Rowley, 480.
facetus n. sp., Rowley, 480.
kentuckiensis ? Shumard ?, Rowley, 480.
sculptus n. sp., Rowley, 480.
Gephyroceras cf. *domanicense* Holzapfel, Clarke, 200.
Gerhardtia n. gen., Hyatt, 625.
Gervillioptis invaginata (?) White, Shattuck, 1098.
Gillicus Hay, Hay, 517.
Hay, Stewart, 1186.
arcuatus (Cope), Stewart, 1186.
Ginkgo pusilla Dn., Penhallow, 967.
Glans Megerle, Dall, 261.
Gleichenia delicatula Heer, Hollick, 591.
rhombifolia n. sp., Hollick, 591.
saundersii n. sp., Berry, 75.
Globoblastus, Hambach, 498.
magnificus n. sp., Hambach, 498.

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- Globoblastus ornatus* n. sp., Hambach, 498.
spathatus n. sp., Hambach, 498.
Glossina spatiosa (Hall)?, Weller, 1291.
Glottidia Dall, Arnold, 38.
albida Hinds, Arnold, 38.
Glycymeris Da Costa, Arnold, 38.
barbarensis Conrad, Arnold, 38.
septentrionalis Middendorf, Arnold, 38.
Glyphæa n. sp., Whiteaves, 1308.
Glyphioceras Hyatt (emend. Haug), Smith, 1137.
calyx Phillips, Smith, 1137.
diadema Goldfuss, Smith, 1137.
 ? *hathawayanum* McChesney, Smith, 1137.
 ? *leviculum* Miller and Faber, Smith, 1137.
pygmaeum Winchell, Smith, 1137.
Glyptocrinus decadactylus Hall, Hayes and Ulrich, 533.
Glyptotherium texanum n. gen. and sp., Osborn, 945.
Gomphina Mörch, Dall, 261.
Gomphognathus, Case, 176.
Goniatites de Haan, Smith, 1137.
choctawensis Shumard, Smith, 1137.
 ? *colubrellus* Morton, Smith, 1137.
crenistris Phillips, Smith, 1137.
greencastlensis Miller and Gurley, Smith, 1137.
kentuckiensis Miller, Smith, 1137.
lunatus Miller and Gurley, Smith, 1137.
 ? *minimus* Shumard, Smith, 1137.
newsomi n. sp., Smith, 1137.
 ? *parvus* Shumard, Smith, 1137.
 ? *politus* Shumard, Smith, 1137.
sphaericus Martin, Smith, 1137.
striatus Sowerby, Smith, 1137.
subcircularis Miller, Smith, 1137.
Goniobasis ? *ortmanni* n. sp., Stanton, 1166.
 ? *silberlingi* n. sp., Stanton, 1166.
Gonilia Stoliczka, Dall, 261.
Gonioloboceras ? *allei* Winchell, Smith, 1137.
goniolobum Meek, Smith, 1137.
 ? *limatum* Miller and Faber, Smith, 1137.
welleri n. sp., Smith, 1137.
Goniphora carinatus (Hall), Weller, 1291.
 sp. undet., Weller, 1291.
Goodallia Turton, Dall, 261.
Gouldia C. B. Adams, Dall, 261.
Gradilucina Cossmann, Dall, 261.
Grammysia constricta Hall, mut. *pygmæa* nov., Loomis, 809.
 sp. undet., Weller, 1291.
Grateloupia Desmoulin, Dall, 261.
 (Cytheriopsis) *aluminensis* n. sp., Dall, 261.
Granatocrinites mihi, n. gen., Troost, Hambach, 498.
cidariformis mihi, Troost, Hambach, 498.
globosus mihi, Troost, Hambach, 498.
Gresslya abducta Phillips sp., Madsen, 836.
gregaria (Zieten) Goldfuss sp., Madsen, 836.
peregrina Phillips sp., Madsen, 836.
Gryphæa mucronata Gabb, Shattuck, 1098.
vesicularis Lamarek, Whiteaves, 1308.
Gymnoptychus minimus n. sp., Matthew, 863.
minor (Douglas), Matthew, 863.

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Genera and species described—Continued.

- Gypidula angulata* n. sp., Weller, 1291.
galeata (Dal.), Weller, 1291.
galeata (Dal.) var., Weller, 1291.
Gyroceras farcimen n. sp., Clarke and Ruedemann, 204.
Gyrodes (conradiana ? Gabb, var.) canadensis, Whiteaves, 1308.
Hadrocerinus plenissimus Lyon, Rowley, 485.
Haliotis Linné, Arnold, 38.
fulgens Philippi, Arnold, 38.
Halonympha Dall and Smith, Dall, 261.
Halyaites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
agglomeratus Hall, Whitfield, 1310.
catenulatus, Hayes and Ulrich, 533.
catenularia (Linn.), Weller, 1291.
catenulatus Linn., Whitfield, 1310.
catenularius Linne (sp.), Clarke and Ruedemann, 204.
radiatus n. sp., Whitfield, 1310.
Haminea Leach, Arnold, 38.
virescens Sowerby, Arnold, 38.
obstrictus Jimbo, Whiteaves, 1308.
Haplocanthosaurus, Hatcher, 507.
priscus, Hatcher, 507.
utterbachi n. sp., Hatcher, 507.
Haplocanthus priscus n. gen. and sp., Hatcher, 511.
Hargeria n. gen., Lucas, 814.
gracilis, Lucas, 814.
Harpagodes shumardi (Hill), Shattuck, 1098.
Harpina ottawensis (Bill.), Weller, 1291.
Harrisia parabola Cleland, Cleland, 208.
Hauericeras gardeni (Baily), Whiteaves, 1308.
Hebertella borealis Billings, Hayes and Ulrich, 533.
sinuata Hall, Hayes and Ulrich, 533.
Helcion giganteus ? var. *vancouverensis*, Whiteaves, 1308.
tenuicostatus n. sp., Whiteaves, 1308.
Helicoceras pariense White ?, Johnson, 647.
Heliophyllum conglomeratum n. sp., Greene, 484.
congregatum n. sp., Greene, 484.
convergens (Hall), Greene, 483.
crotalum n. sp., Greene, 481.
dispansum n. sp., Greene, 481.
mirum n. sp., Greene, 481.
vesiculatum (Hall), Greene, 485.
zenkeri (Billings), Greene, 483.
Helix (Epiphragmophora) sp. indet., Arnold, 38.
Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
Helodus incisus n. sp., Eastman, 337.
rugosus Newberry and Worthen, Eastman, 337.
Hemitapes Römer, Dall, 261.
Heptodon ?, Douglass, 317.
Here Gabb, Dall, 261.
Hesperhys n. gen., Douglass, 317.
vagrans n. sp., Douglass, 317.
Hesperornis gracilis, Lucas, 814.
regalis, Lucas, 814, 815.
Heteroceras elongatum n. sp., Whiteaves, 1308.
hornbyense Whiteaves, Whiteaves, 1308.

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Genera and species described—Continued.

- Heteroclidus* n. subg., Dall, Dall, 261.
Heterotrypa parvulipora Ulrich and Bassler, Hayes and Ulrich, 533.
Hindia fibrosa (Roemer), Weller, 1291.
nodulosa Whiteaves, 1308.
parva Ulrich, Weller, 1291.
Hinnites Defrance, Arnold, 38.
Hipparionyx proximus (Van.), Weller, 1291.
Ilipponyx De France, Arnold, 38.
antiquatus Linnæus, Arnold, 38.
cranioides Carpenter, Arnold, 38.
tumens Carpenter, Arnold, 38.
Holasaphus, Matthew, 858.
centropyge, Matthew, 858.
Holocystis papulosus ? M. & G., Rowley, 485.
Holopea antiqua (Van.), Weller, 1291.
parvula Ulrich, Weller, 1291.
? raymondia n. sp., Cleland, 208.
supraplana U. & S. ?, Weller, 1291.
symmetrica Hall, Weller, 1291.
? voluta n. sp., Cleland, 208.
Homacanthus Agassiz, Eastman, 337.
acinaciformis n. sp., Eastman, 337.
delicatulus n. sp., Eastman, 337.
Homalonotus vanuxemi Hall, Weller, 1291.
Homomya austiniensis n. sp., Shattuck, 1098.
vulgaris n. sp., Shattuck, 1098.
Homotrypa Ulrich, Bassler, 60.
austini n. sp., Bassler, 50.
bassleri Nickles, Bassler, 60.
cincinnatiensis n. sp., Bassler, 60.
communis n. sp., Bassler, 60.
curvata Ulrich, Bassler, 60.
curvata var. *præcepta* n. var., Bassler, 60.
cylindrica n. sp., Bassler, 60.
dawsoni (Nicholson), Bassler, 60.
dumosa n. sp., Bassler, 60.
fiabellaris Ulrich, Bassler, 60.
fiabellaris var. *spinifera* n. var., Bassler, 60.
frondosa n. sp., Bassler, 60.
gelasinosa Ulrich, Bassler, 60.
grandis n. sp., Bassler, 60.
libana n. sp., Bassler, 60.
nicklesi n. sp., Bassler, 60.
nodulosa n. sp., Bassler, 60.
nitida n. sp., Bassler, 60.
obliqua Ulrich, Bassler, 60.
pulchra n. sp., Bassler, 60.
ramulosa n. sp., Bassler, 60.
richmondensis n. sp., Bassler, 60.
splendens n. sp., Bassler, 60.
wortheni (James), Bassler, 60.
wortheni var. *intercellata* n. var., Bassler, 60.
wortheni var. *prominens* n. var., Bassler, 60.
Homotrypella nodosa Ulrich and Bassler, Hayes and Ulrich, 533.
Honeoyea n. gen., Clarke, 200.
desmata n. sp., Clarke, 200.
erinacea n. sp., Clarke, 200.
major n. sp., Clarke, 200.
simplex n. sp., Clarke, 200.
styliophila n. sp., Clarke, 200.
Hoplopatria bennettii Woodward, Whiteaves, 1308.

Paleontology—Continued.*Genera and species described—Continued.*

- Gafrarium* Bolten, Dall, 261.
 section *Circe* Schumacher, Dall, 261.
 section *Circenita* Jousseau, Dall, 261.
 section *Gouldia* C. B. Adams, Dall, 261.
 section *Farmulina* Dall, Dall, 261.
 ? section *Radiocrista* Dall, Dall, 261.
 (*Gouldia*) *altum* n. sp., Dall, 261.
 (*Gouldia*) *erosum* n. sp., Dall, 261.
 (*Gouldia*) *metastriatum* Conrad, Dall, 261.
Galerus Humphrey, Arnold, 38.
mammillaris Broderip, Arnold, 38.
Galesaurus, Case, 176.
Gastrioceras Hyatt, Smith, 1137.
branneri Smith, Smith, 1137.
carbonarium von Buch, Smith, 1137.
compressum Hyatt, Smith, 1137.
entogonum Gabb, Smith, 1137.
excelsum Meek, Smith, 1137.
globulosum Meek and Worthen, Smith, 1137.
illinoisense Miller and Gurley, Smith, 1137.
kansasense Miller and Gurley, Smith, 1137.
kingi Hall and Whitfield, Smith, 1137.
listeri Martin, Smith, 1137.
montgomeryense Miller and Gurley, Smith, 1137.
nolinense Cox, Smith, 1137.
occidentale Miller and Faber, Smith, 1137.
planorbiforme Shumard, Smith, 1137.
subcavum Miller and Gurley, Smith, 1137.
welleri n. sp., Smith, 1137.
Gastrochæna striatula n. sp., Aldrich, 17.
Geinitzia formosa Heer, Berry, 76.
Geloina Gray, Dall, 261.
Gemma Deshayes, Dall, 261.
gemma Totten, Dall, 261.
gemma var. *purpurea* Lea, Dall, 261.
magna n. sp., Dall, 261.
magna var. *virginiana* Dall, Dall, 261.
trigona n. sp., Dall, 261.
Gennæocrinus comptus n. sp., Rowley, 480.
comptus var. *spiniferus* n. var., Rowley, 480.
facetus n. sp., Rowley, 480.
kentuckiensis ? Shumard ?, Rowley, 480.
sculptus n. sp., Rowley, 480.
Gephyroceras cf. *domanicense* Holzapfel, Clarke, 200.
Gerhardtia n. gen., Hyatt, 625.
Gervillioopsis invaginata (?) White, Shattuck, 1098.
Gillicus Hay, Hay, 517.
Hay, Stewart, 1186.
arcuatus (Cope), Stewart, 1186.
Ginkgo pusilla Dn., Penhallow, 967.
Glans Megerle, Dall, 261.
Gleichenia delicatula Heer, Hollick, 591.
rhombifolia n. sp., Hollick, 591.
saundersi n. sp., Berry, 75.
Globoblastus, Hambach, 498.
magnificus n. sp., Hambach, 498.

Paleontology—Continued.*Genera and species described—Continued.*

- Globoblastus ornatus* n. sp., Hambach, 498.
spathatus n. sp., Hambach, 498.
Glossina spatiosa (Hall) ?, Weller, 1291.
Glottidia Dall, Arnold, 38.
albida Hinds, Arnold, 38.
Glycymeris Da Costa, Arnold, 38.
barbarensis Conrad, Arnold, 38.
septentrionalis Middendorf, Arnold, 38.
Glyphæa n. sp., Whiteaves, 1308.
Glyphioceras Hyatt (emend. Haug), Smith, 1137.
calyx Phillips, Smith, 1137.
diadema Goldfuss, Smith, 1137.
 ? *hathawayanum* McChesney, Smith, 1137.
 ? *leviculum* Miller and Faber, Smith, 1137.
pygmaeum Winchell, Smith, 1137.
Glyptocrinus decadactylus Hall, Hayes and Ulrich, 533.
Glyptotherium texanum n. gen. and sp., Osborn, 945.
Gomphina Mörch, Dall, 261.
Gomphognathus, Case, 176.
Goniatites de Haan, Smith, 1137.
choctawensis Shumard, Smith, 1137.
 ? *colubrellus* Morton, Smith, 1137.
crenistria Phillips, Smith, 1137.
greencastlensis Miller and Gurley, Smith, 1137.
kentuckiensis Miller, Smith, 1137.
lunatus Miller and Gurley, Smith, 1137.
 ? *minimus* Shumard, Smith, 1137.
newsomi n. sp., Smith, 1137.
 ? *parvus* Shumard, Smith, 1137.
 ? *politus* Shumard, Smith, 1137.
sphaericus Martin, Smith, 1137.
striatus Sowerby, Smith, 1137.
subcircularis Miller, Smith, 1137.
Goniobasis ? *ortmanni* n. sp., Stanton, 1166.
 ? *silberlingi* n. sp., Stanton, 1166.
Gonilia Stoliczka, Dall, 261.
Gonioloboceras ? *allei* Winchell, Smith, 1137.
goniolobum Meek, Smith, 1137.
 ? *limatum* Miller and Faber, Smith, 1137.
welleri n. sp., Smith, 1137.
Goniophora carinatus (Hall), Weller, 1291.
 sp. undet., Weller, 1291.
Goodallia Turton, Dall, 261.
Gouldia C. B. Adams, Dall, 261.
Gradilucina Cossmann, Dall, 261.
Grammysia constricta Hall, mut. *pygmæa* nov., Loomis, 809.
 sp. undet., Weller, 1291.
Gratoloupia Desmoulin, Dall, 261.
 (Cytheriopsis) *alumensis* n. sp., Dall, 261.
Granatocrinites mihi, n. gen., Troost, Hambach, 498.
cidariformis mihi, Troost, Hambach, 498.
globosus mihi, Troost, Hambach, 498.
Gresslya abducta Phillips sp., Madsen, 836.
gregaria (Zieten) Goldfuss sp., Madsen, 836.
peregrina Phillips sp., Madsen, 836.
Gryphæa mucronata Gabb, Shattuck, 1098.
vesicularis Lamarck, Whiteaves, 1308.
Gymnoptychus minimus n. sp., Matthew, 863.
 minor (Douglas), Matthew, 863.

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Genera and species described—Continued.

- Gypidula angulata* n. sp., Weller, 1291.
galeata (Dal.), Weller, 1291.
galeata (Dal.) var., Weller, 1291.
Gyroceras farclimen n. sp., Clarke and Ruedemann, 204.
Gyrodes (conradiana ? Gabb, var.) canadensis, Whiteaves, 1308.
Hadrocrinus plenissimus Lyon, Rowley, 485.
Haliotis Linné, Arnold, 38.
fulgens Philippi, Arnold, 38.
Halonympha Dall and Smith, Dall, 261.
Halysites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
agglomeratus Hall, Whitfield, 1310.
catenulatus, Hayes and Ulrich, 533.
catenularia (Linn.), Weller, 1291.
catenulatus Linn., Whitfield, 1310.
catenularius Linne (sp.), Clarke and Ruedemann, 204.
radiatus n. sp., Whitfield, 1310.
Haminea Leach, Arnold, 38.
virescens Sowerby, Arnold, 38.
obstrictus Jimbo, Whiteaves, 1308.
Haplocanthosaurus, Hatcher, 507.
priscus, Hatcher, 507.
utterbachi n. sp., Hatcher, 507.
Haplocanthus priscus n. gen. and sp., Hatcher, 511.
Hargeria n. gen., Lucas, 814.
gracilis, Lucas, 814.
Harpagodes shumardi (Hill), Shattuck, 1098.
Harpina ottawensis (Bill.), Weller, 1291.
Harrisia parabola Cleland, Cleland, 208.
Hauericeras gardeni (Bally), Whiteaves, 1308.
Hebertella borealis Billings, Hayes and Ulrich, 533.
sinuata Hall, Hayes and Ulrich, 533.
Helcion giganteus ? var. *vancouverensis*, Whiteaves, 1308.
tenuicostatus n. sp., Whiteaves, 1308.
Helicoceras parliense White ?, Johnson, 647.
Heliophyllum conglomeratum n. sp., Greene, 484.
congregatum n. sp., Greene, 484.
convergens (Hall), Greene, 483.
crotalum n. sp., Greene, 481.
dispansum n. sp., Greene, 481.
mirum n. sp., Greene, 481.
vesiculatum (Hall), Greene, 485.
zenkeri (Billings), Greene, 483.
Helix (Epiphragmophora) sp. indet., Arnold, 38.
Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
Helodus incisus n. sp., Eastman, 337.
rugosus Newberry and Worthen, Eastman, 337.
Hemitapes Römer, Dall, 261.
Heptodon ?, Douglass, 317.
Here Gabb, Dall, 261.
Hesperhys n. gen., Douglass, 317.
vagrans n. sp., Douglass, 317.
Hesperornis gracilis, Lucas, 814.
regalis, Lucas, 814, 815.
Heteroceras elongatum n. sp., Whiteaves, 1308.
hornbyense Whiteaves, Whiteaves, 1308.

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Genera and species described—Continued.

- Heteroclidus* n. subg., Dall, Dall, 261.
Heterotrypa parvulipora Ulrich and Bassler, Hayes and Ulrich, 533.
Hindia fibrosa (Roemer), Weller, 1291.
nodulosa Whiteaves, 1308.
parva Ulrich, Weller, 1291.
Hinnites Defrance, Arnold, 38.
Hipparionyx proximus (Van.), Weller, 1291.
Iipponyx De France, Arnold, 38.
antiquatus Linnæus, Arnold, 38.
cranioides Carpenter, Arnold, 38.
tumens Carpenter, Arnold, 38.
Holasaphus, Matthew, 858.
centropyge, Matthew, 858.
Holocystis papulosus ? M. & G., Rowley, 485.
Holopea antiqua (Van.), Weller, 1291.
parvula Ulrich, Weller, 1291.
? raymondia n. sp., Cleland, 208.
supraplana U. & S. ?, Weller, 1291.
symmetrica Hall, Weller, 1291.
? voluta n. sp., Cleland, 208.
Homacanthus Agassiz, Eastman, 337.
acinaciformis n. sp., Eastman, 337.
delicatulus n. sp., Eastman, 337.
Homalonotus vanuxemi Hall, Weller, 1291.
Homomya austiniensis n. sp., Shattuck, 1098.
vulgaris n. sp., Shattuck, 1098.
Homotrypa Ulrich, Bassler, 60.
austini n. sp., Bassler, 30.
bassleri Nickles, Bassler, 60.
cincinnatiensis n. sp., Bassler, 60.
communis n. sp., Bassler, 60.
curvata Ulrich, Bassler, 60.
curvata var. *præcepta* n. var., Bassler, 60.
cylindrica n. sp., Bassler, 60.
dawsoni (Nicholson), Bassler, 60.
dumosa n. sp., Bassler, 60.
fiabellaris Ulrich, Bassler, 60.
fiabellaris var. *spinifera* n. var., Bassler, 60.
frondosa n. sp., Bassler, 60.
gelasinosa Ulrich, Bassler, 60.
grandis n. sp., Bassler, 60.
libana n. sp., Bassler, 60.
nicklesi n. sp., Bassler, 60.
nodulosa n. sp., Bassler, 60.
nitida n. sp., Bassler, 60.
obliqua Ulrich, Bassler, 60.
pulchra n. sp., Bassler, 60.
ramulosa n. sp., Bassler, 60.
richmondensis n. sp., Bassler, 60.
splendens n. sp., Bassler, 60.
wortheni (James), Bassler, 60.
wortheni var. *intercellata* n. var., Bassler, 60.
wortheni var. *prominens* n. var., Bassler, 60.
Homotrypella nodosa Ulrich and Bassler, Hayes and Ulrich, 533.
Honeoyea n. gen., Clarke, 200.
desmata n. sp., Clarke, 200.
erinacea n. sp., Clarke, 200.
major n. sp., Clarke, 200.
simplex n. sp., Clarke, 200.
styliophila n. sp., Clarke, 200.
Hoploparia bennettii Woodward, Whiteaves, 1308.

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- Gafrarium* Bolten, Dall, 261.
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 section *Circenita* Jousseau, Dall, 261.
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 ? section *Radiocrista* Dall, Dall, 261.
 (*Gouldia*) *altum* n. sp., Dall, 261.
 (*Gouldia*) *erosum* n. sp., Dall, 261.
 (*Gouldia*) *metastriatum* Conrad, Dall, 261.
Galerus Humphrey, Arnold, 38.
mammillaris Broderip, Arnold, 38.
Galesaurus, Case, 176.
Gastrioceras Hyatt, Smith, 1137.
branneri Smith, Smith, 1137.
carbonarium von Buch, Smith, 1137.
compressum Hyatt, Smith, 1137.
entogonum Gabb, Smith, 1137.
excelsum Meek, Smith, 1137.
globulosum Meek and Worthen, Smith, 1137.
illinoisense Miller and Gurley, Smith, 1137.
kansasense Miller and Gurley, Smith, 1137.
kingi Hall and Whitfield, Smith, 1137.
listeri Martin, Smith, 1137.
montgomeryense Miller and Gurley, Smith, 1137.
nolinense Cox, Smith, 1137.
occidentale Miller and Faber, Smith, 1137.
planorbiforme Shumard, Smith, 1137.
subcavum Miller and Gurley, Smith, 1137.
welleri n. sp., Smith, 1137.
Gastrochæna striatula n. sp., Aldrich, 17.
Geinitzia formosa Heer, Berry, 76.
Geloina Gray, Dall, 261.
Gemma Deshayes, Dall, 261.
gemma Totten, Dall, 261.
gemma var. *purpurea* Lea, Dall, 261.
magna n. sp., Dall, 261.
magna var. *virginiana* Dall, Dall, 261.
trigona n. sp., Dall, 261.
Gemmaocrinus comptus n. sp., Rowley, 480.
comptus var. *spiniferus* n. var., Rowley, 480.
facetus n. sp., Rowley, 480.
kentuckiensis ? Shumard ?, Rowley, 480.
sculptus n. sp., Rowley, 480.
Gephyroceras cf. *domanicense* Holzapfel, Clarke, 200.
Gerhardtia n. gen., Hyatt, 625.
Gervilliothis invaginata (?) White, Shattuck, 1098.
Gillicus Hay, Hay, 517.
Hay, Stewart, 1186.
arcuatus (Cope), Stewart, 1186.
Ginkgo pusilla Dn., Penhallow, 967.
Glans Megerle, Dall, 261.
Gleichenia delicatula Heer, Hollick, 591.
rhombifolia n. sp., Hollick, 591.
saundersii n. sp., Berry, 75.
Globoblastus, Hambach, 498.
magnificus n. sp., Hambach, 498.

Paleontology—Continued.*Genera and species described—Continued.*

- Globoblastus ornatus* n. sp., Hambach, 498.
spathatus n. sp., Hambach, 498.
Glossina spatiosa (Hall)?, Weller, 1291.
Glottidia Dall, Arnold, 38.
albida Hinds, Arnold, 38.
Glycymeris Da Costa, Arnold, 38.
barbarensis Conrad, Arnold, 38.
septentrionalis Middendorf, Arnold, 38.
Glyphæa n. sp., Whiteaves, 1308.
Glyphioceras Hyatt (emend. Haug), Smith, 1137.
calyx Phillips, Smith, 1137.
diadema Goldfuss, Smith, 1137.
 ? *hathawayanum* McChesney, Smith, 1137.
leviculum Miller and Faber, Smith, 1137.
pygmæum Winchell, Smith, 1137.
Glyptocrinus decadactylus Hall, Hayes and Ulrich, 533.
Glyptotherium texanum n. gen. and sp., Osborn, 945.
Gomphina Mörch, Dall, 261.
Gomphognathus, Case, 176.
Goniatis de Haan, Smith, 1137.
choctawensis Shumard, Smith, 1137.
 ? *colubrellus* Morton, Smith, 1137.
crenistris Phillips, Smith, 1137.
greencastlensis Miller and Gurley, Smith, 1137.
kentuckiensis Miller, Smith, 1137.
lunatus Miller and Gurley, Smith, 1137.
 ? *minimus* Shumard, Smith, 1137.
newsomi n. sp., Smith, 1137.
 ? *parvus* Shumard, Smith, 1137.
 ? *politus* Shumard, Smith, 1137.
sphaericus Martin, Smith, 1137.
striatus Sowerby, Smith, 1137.
subcircularis Miller, Smith, 1137.
Goniobasis ? *ortmanni* n. sp., Stanton, 1166.
 ? *silverlingi* n. sp., Stanton, 1166.
Gonilia Stoliczka, Dall, 261.
Gonioloboceras ? *allei* Winchell, Smith, 1137.
goniolobum Meek, Smith, 1137.
 ? *limatum* Miller and Faber, Smith, 1137.
welleri n. sp., Smith, 1137.
Goniphora carinatus (Hall), Weller, 1291.
 sp. undet., Weller, 1291.
Goodallia Turton, Dall, 261.
Gouldia C. B. Adams, Dall, 261.
Gradilucina Cossmann, Dall, 261.
Grammysia constricta Hall, mut. *pygmæa* nov., Loomis, 809.
 sp. undet., Weller, 1291.
Gratelopia Desmoulins, Dall, 261.
 (Cytheriopsis) *aluminensis* n. sp., Dall, 261.
Granatocrinites mihi, n. gen., Troost, Hambach, 498.
cidariformis mihi, Troost, Hambach, 498.
globosus mihi, Troost, Hambach, 498.
Gresslya abducta Phillips sp., Madsen, 836.
gregaria (Zieten) Goldfuss sp., Madsen, 836.
peregrina Phillips sp., Madsen, 836.
Gryphæa mucronata Gabb, Shattuck, 1098.
vesicularis Lamarck, Whiteaves, 1308.
Gymnoptychus minimus n. sp., Matthew, 863.
 minor (Douglas), Matthew, 863.

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Genera and species described—Continued.

- Gypidula angulata* n. sp., Weller, 1291.
galeata (Dal.), Weller, 1291.
galeata (Dal.) var., Weller, 1291.
Gyroceras farcimen n. sp., Clarke and Ruedemann, 204.
Gyrodes (conradiana? Gabb, var.) canadensis, Whiteaves, 1308.
Hadrocrinus plenissimus Lyon, Rowley, 485.
Hallotis Linné, Arnold, 38.
fulgens Philippi, Arnold, 38.
Halonympha Dall and Smith, Dall, 261.
Halysites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
agglomeratus Hall, Whitfield, 1310.
catenulatus, Hayes and Ulrich, 533.
catenularia (Linn.), Weller, 1291.
catenulatus Linn., Whitfield, 1310.
catenularius Linne (sp.), Clarke and Ruedemann, 204.
radiatus n. sp., Whitfield, 1310.
Haminea Leach, Arnold, 38.
virescens Sowerby, Arnold, 38.
obstrictus Jimbo, Whiteaves, 1308.
Haplocanthosaurus, Hatcher, 507.
priscus, Hatcher, 507.
utterbachi n. sp., Hatcher, 507.
Haplocanthus priscus n. gen. and sp., Hatcher, 511.
Hargeria n. gen., Lucas, 814.
gracilis, Lucas, 814.
Harpagodes shumardi (Hill), Shattuck, 1098.
Harpina ottawensis (Bill.), Weller, 1291.
Harrisia parabola Cleland, Cleland, 208.
Hauericeras gardeni (Baily), Whiteaves, 1308.
Hebertella borealis Billings, Hayes and Ulrich, 533.
sinuata Hall, Hayes and Ulrich, 533.
Helcion giganteus? var. *vancouverensis*, Whiteaves, 1308.
tenuicostatus n. sp., Whiteaves, 1308.
Helicoceras parietense White?, Johnson, 647.
Helophyllum conglomeratum n. sp., Greene, 484.
congregatum n. sp., Greene, 484.
convergens (Hall), Greene, 483.
crotalum n. sp., Greene, 481.
dispansum n. sp., Greene, 481.
mirum n. sp., Greene, 481.
vesiculatum (Hall), Greene, 485.
zenkeri (Billings), Greene, 483.
Helix (Epiphragmophora) sp. indet., Arnold, 38.
Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
Helodus incisus n. sp., Eastman, 337.
rugosus Newberry and Worthen, Eastman, 337.
Hemitapes Römer, Dall, 261.
Heptodon?, Douglass, 317.
Here Gabb, Dall, 261.
Hesperhys n. gen., Douglass, 317.
vagrans n. sp., Douglass, 317.
Hesperornis gracilis, Lucas, 814.
regalis, Lucas, 814, 815.
Heteroceras elongatum n. sp., Whiteaves, 1308.
hornbyense Whiteaves, Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Heteroclidus* n. subg., Dall, Dall, 261.
Heterotrypa parvulipora Ulrich and Bassler, Hayes and Ulrich, 533.
Hindia fibrosa (Roemer), Weller, 1291.
nodulosa Whiteaves, 1308.
parva Ulrich, Weller, 1291.
Hinnites Defrance, Arnold, 38.
Hipparionyx proximus (Van.), Weller, 1291.
Hipponyx De France, Arnold, 38.
antiquatus Linnæus, Arnold, 38.
cranioides Carpenter, Arnold, 38.
tumens Carpenter, Arnold, 38.
Holasaphus, Matthew, 858.
centropyge, Matthew, 858.
Holocystis papulosus? M. & G., Rowley, 485.
Holopea antiqua (Van.), Weller, 1291.
parvula Ulrich, Weller, 1291.
? raymondia n. sp., Cleland, 208.
supraplana U. & S.?, Weller, 1291.
symmetrica Hall, Weller, 1291.
? voluta n. sp., Cleland, 208.
Homacanthus Agassiz, Eastman, 337.
acinaeformis n. sp., Eastman, 337.
delicatulus n. sp., Eastman, 337.
Homalonotus vanuxemi Hall, Weller, 1291.
Homomya austiniensis n. sp., Shattuck, 1098.
vulgaris n. sp., Shattuck, 1098.
Homotrypa Ulrich, Bassler, 60.
austini n. sp., Bassler, 60.
bassleri Nickles, Bassler, 60.
cincinnatiensis n. sp., Bassler, 60.
communis n. sp., Bassler, 60.
curvata Ulrich, Bassler, 60.
curvata var. *præcipita* n. var., Bassler, 60.
cylindrica n. sp., Bassler, 60.
dawsoni (Nicholson), Bassler, 60.
dumosa n. sp., Bassler, 60.
flabellaris Ulrich, Bassler, 60.
flabellaris var. *spinifera* n. var., Bassler, 60.
frondosa n. sp., Bassler, 60.
gelasinosa Ulrich, Bassler, 60.
grandis n. sp., Bassler, 60.
libana n. sp., Bassler, 60.
nicklesi n. sp., Bassler, 60.
nodulosa n. sp., Bassler, 60.
nitida n. sp., Bassler, 60.
obliqua Ulrich, Bassler, 60.
pulchra n. sp., Bassler, 60.
ramulosa n. sp., Bassler, 60.
richmondensis n. sp., Bassler, 60.
splendens n. sp., Bassler, 60.
wortheni (James), Bassler, 60.
wortheni var. *intercellata* n. var., Bassler, 60.
wortheni var. *prominens* n. var., Bassler, 60.
Homotrypella nodosa Ulrich and Bassler, Hayes and Ulrich, 533.
Honeoyea n. gen., Clarke, 200.
desmata n. sp., Clarke, 200.
erinacea n. sp., Clarke, 200.
major n. sp., Clarke, 200.
simplex n. sp., Clarke, 200.
styliophila n. sp., Clarke, 200.
Hoplopatria bennettii Woodward, Whiteaves, 1308.

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Genera and species described—Continued.

- Hoploparia groenlandica n. sp., Ravn, 996.
 Hormotoma salteri Ulrich, Weller, 1291.
 whiteavesi n. sp., Clarke and Ruedemann, 204.
 Hughmilleria n. gen., Sarle, 1070.
 socialis n. sp., Sarle, 1070.
 socialis var. robusta n. var., Sarle, 1070.
 Hustedia mormoni (Marcou), Beede, 64.
 mormoni Marcou, Girty, 455.
 Hyænognathus? (Porthocyon n. gen.?) dubius n. sp., Merriam, 883.
 pachyodon n. gen. and n. sp., Merriam, 883.
 Hyalostella sp., Girty, 455.
 Hyattella? lamellosa n. sp., Weller, 1291.
 Hydronocerinus depressus (Troost), Grabau, 464.
 kansasensis Weller, Beede, 64.
 subsinuatus Miller and Gurley, Beede, 64.
 Hyolithes centennialis Barrett, Weller, 1291.
 neapolis Clarke, Clarke, 200.
 cf. tenuistriatus Lins., Matthew, 858.
 Hyphantosoma Dall, 261.
 Hyrachyus, Douglass, 317.
 ? prisceus n. sp., Douglass, 317.
 Hyracodon sp., Matthew, 863.
 Hysteroconcha Fischer, Dall, 261.
 Hystriosphonia? sp., Girty, 455.
 Icanotia Stoliczka, Dall, 261.
 Ichthyocrinus magnaradialis n. sp., Weller, 1291.
 Ichthyodectes Cope, Loomis, 808.
 Ichthyodectes Cope, Stewart, 1186.
 acanthicus Cope?, Stewart, 1186.
 anaides Cope, Hay, 517.
 anaides Cope, Loomis, 808.
 anaides Cope, Stewart, 1186.
 cruentus Hay, Stewart, 1186.
 ctenodon Cope, Loomis, 808.
 ctenodon Cope, Stewart, 1186.
 hamatus Cope, Loomis, 808.
 hamatus Cope, Stewart, 1186.
 multidentatus Cope, Hay, 517.
 multidentatus Cope, Loomis, 808.
 occidentalis Leidy, Loomis, 808.
 Ichthyosaurus, Merriam, 882, 885.
 Ictops acutidens Douglas, Matthew, 863.
 thomsoni n. sp., Matthew, 863.
 Illænurus columbiana n. sp., Weller, 1291.
 Indiana, Matthew, 858.
 lippa, Matthew, 858.
 ovalis, Matthew, 858.
 ovalis mut. prima, Matthew, 858.
 Inoceramus balchii M. and H., Johnson, 647.
 crispus var. barabini Morton, Johnson, 647.
 digitatus (Sowerby) Schmidt, Whiteaves, 1308.
 dimidiatus White, Johnson, 647.
 fragilis H. and M., Johnson, 647.
 irregularis n. sp., Johnson, 647.
 labiatus Schlotheim, Johnson, 647.
 simpsoni Meek, Johnson, 647.
 vanuxemi M. and H., Johnson, 647.
 n. sp.?, Johnson, 647.
 sp., Shattuck, 1098.

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Genera and species described—Continued.

- Iphidea pannula White sp., Matthew, 857.
 Isapis H. & A. Adams, Arnold, 38.
 Ischnochiton Gray, Arnold, 38.
 regularis Carpenter, Arnold, 38.
 Ischyromys veterior n. sp., Matthew, 863.
 Isocardia medialis (Conrad), Shattuck, 1098.
 Isochilina gregaria Whitfield, var. (?), Jones, 655.
 gregaria (Whitfield), var. ulrichiana, nov., Jones, 655.
 sp.?, Jones, 655.
 Isodomo (Deshayes) Cossmann, Dall, 261.
 Isotelus canalis Whitf., Weller, 1291.
 florencevillensis n. n. (Isotelus susse Clarke, not Whitfield), Calvin, 158.
 gigas De Kay, Weller, 1291.
 susse Whitfield, Calvin, 158.
 Isurus mantelli (Geinitz), Williston, 1330.
 Ivara D. & B. (MSS.), Arnold, 38.
 Ixartia Leach, Dall, 261.
 Jækelocystis n. gen., Schuchert, 1091.
 hartleyi n. sp., Schuchert, 1091.
 Jagonia Récluz, Dall, 261.
 Janassa maxima n. sp., Eastman, 337.
 ungula n. sp., Eastman, 337.
 Kadaliosaurus Credner, Osborn, 948.
 Katelsia (Römer) Tryon, Dall, 261.
 Kellia Turton, Arnold, 38.
 laperousii Deshayes, Arnold, 38.
 suborbicularis Montagu, Arnold, 38.
 Kennerleyia Cpr. (em.), Dall, 261.
 Kennerlia Carpenter, Arnold, 38.
 Kingena occidentalis n. sp., Whiteaves, 1308.
 Klonoceras darwini Billings (sp.), Clarke and Ruedemann, 204.
 medullare Hall (sp.), Clarke and Ruedemann, 204.
 Kirkbya sp., Girty, 455.
 Kochia Frech, Clarke, 200.
 ungula n. sp., Clarke, 200.
 Labiosa (Schmidt) Möller, Arnold, 38.
 (Raeta) undulata Gould, Arnold, 38.
 Lacuna Turton, Arnold, 38.
 compacta Carpenter, Arnold, 38.
 porrecta Carpenter, Arnold, 38.
 solidula (Lovén) Carpenter, Arnold, 38.
 Lævicardium Swainson, Arnold, 38.
 Lamellaria Montagu, Arnold, 38.
 stearnsii Dall, Arnold, 38.
 Lamelliconcha Dall, 261.
 Lamna appendiculata Agassiz, Whiteaves, 1308.
 appendiculata (Römer), Williston, 1330.
 macrorhiza Cope, Williston, 1330.
 mudgei Cope, Williston, 1330.
 quinquelateralis Cragin, Williston, 1330.
 sulcata (Geinitz), Williston, 1330.
 sp., Williston, 1330.
 (Odontaspis?) sp., Williston, 1330.
 Lancea Pease, Arnold, 38.
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 Lasiopterus mucronatus (Hall), Weller, 1291.
 fischeri Heer, Penhallow, 967.
 Laternula Bolton, Dall, 261.

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- Latirus elaboratus* n. sp., Aldrich, 16.
Laurophyllum angustifolium Newb., Berry, 76.
Laurus hollæ Heer, Berry, 76.
hollickii n. sp., Berry, 76.
plutonia Heer, Berry, 76.
proteæfolia Lesq., Berry, 76.
Lazaria Conrad, Arnold, 38.
subquadrata Carpenter, Arnold, 38.
Leda Schumacher, Arnold, 38.
fossa Baird, Arnold, 38.
hamata Carpenter, Arnold, 38.
minuta Fabr. var. *præcursor* n. var., Arnold, 38.
rostellata Conrad, mut. *pygmæa* nov., Loomis, 809.
taphria Dall, Arnold, 38.
Leioclema? sp., Girty, 455.
Leiomya A. Adams, Dall, 261.
Leperditella ornata n. sp., Weller, 1291.
Leperditia alta (Con.), Weller, 1291.
altoides n. sp., Weller, 1291.
balthica Hisinger var. *guelphica* Jones, Clarke and Ruedemann, 204.
elongata n. sp., Weller, 1291.
fabulites (Con.), Weller, 1291.
gigantea n. sp., Weller, 1291.
? rugosa, Matthew, 858.
 sp., Girty, 455.
Lepidocardia Dall, 261.
Lepidostrobos, Smith, 1125.
Leptæna rhomboidalis Wilck., Weller, 1291.
rhomboidalis (Wilck.) var. *ventricosa* (Hall), Weller, 1291.
Leptaxinus Verrill and Bush, Dall, 261.
Leptesthes Meek, Dall, 261.
Leptichthys Stewart, 1186.
agilis n. sp., Stewart, 1186.
Leptobolus Hall, Matthew, 858.
atavus, Matthew, 858.
atavus mut. *insulæ* n. mut., Matthew, 858.
atavus mut. *tritavus* n. mut., Matthew, 858.
collicia, Matthew, 858.
collicia var. *collis* n. var., Matthew, 858.
flumenis n. sp., Matthew, 858.
gemmaulus, Matthew, 858.
cf. grandis, Matthew, 857.
cf. linguloides, Matthew, 858.
torrentis n. sp., Matthew, 858.
Leptocheirus n. gen., Merriam, 882.
zitteli n. sp., Merriam, 882.
Leptocodon rectus Williston, Stewart, 1186.
Leptodomus interplicatus n. sp., Clarke, 200.
multiplex n. sp., Clarke, 200.
Leptomeryx? *esulcatus* Cope, Matthew, 863.
mammifer Cope, Matthew, 863.
transmontanus n. sp., Douglass, 317.
Leptopora winchelli White, Girty, 455.
Leptophyllia sp. (no. 1), Vaughan, 1244.
 sp. (no. 2), Vaughan, 1244.
Leptosomus Marck, Hay, 517.
lineatus (Cope), Hay, 517.
nasutulus (Cope), Hay, 517.
percrassus (Cope), Hay, 517.

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- Leptostyrax bicuspidatus* Williston, Williston, 1330.
Leptothyra Carpenter, Arnold, 38.
bacula Carpenter, Arnold, 38.
carpenteri Pilsbry, Arnold, 38.
paucicostata Dall, Arnold, 38.
Leptotrachylus longipinnis Cope, Hay, 517.
Leptotragulus profectus n. sp., Matthew, 863.
Lichas pustulosus Hall, Weller, 1291.
Lichenalia torta Hall, Weller, 1291.
Lima (Bruguière) Cuvier, Arnold, 38.
 (Mantellum) *dehiscens* Conrad, Arnold, 38.
retifera Shumard, Beede, 64.
shumardi n. sp., Shattuck, 1098.
suciensis n. sp., Whiteaves, 1308.
wacoensis Römer, Shattuck, 1098.
 sp., Shattuck, 1098.
 sp. ind., Whiteaves, 1308.
Limnænetes sp., Matthew, 863.
Limopteria alata (Beede), Beede, 64.
gibbosa (Meek and Worthen), Beede, 64.
longispina (Cox), Beede, 64.
marian (White), Beede, 61.
subalata (Beede and Rogers), Beede, 64.
Lingula carbonaria Shumard, Girty, 455.
? ovata n. sp., Cleland, 208.
mytiloides Sowerby, Beede, 64.
philomela Bill.?, Weller, 1291.
riciniformis Hall, Weller, 1291.
tighti Herrick, Girty, 455.
Lingulasma galenensis W. & S., Weller, 1291.
Lingulella concinna, Matthew, 858.
cf. davisii McCoy, Matthew, 858.
lævis var. *grandis* n. var., Matthew, 858.
lævis var. *lens*, Matthew, 858.
longovalis n. sp., Matthew, 858.
cf. longovalis, Matthew, 858.
maccconnelli Walcott, Matthew, 857.
radula var. *aspera* n. var., Matthew, 858.
roberti n. sp., Matthew, 858.
selwyni, Matthew, 858.
stoneana Whitf., Weller, 1291.
tumida, Matthew, 858.
Lingulepis Hall, Matthew, 858.
gregwa, Matthew, 858.
gregwa var. *robusta* n. var., Matthew, 858.
longinervis n. sp., Matthew, 858.
pumila n. sp., Matthew, 858.
rotunda n. sp., Matthew, 858.
starri var., Matthew, 858.
starri mut. *exigua* n. mut., Matthew, 858.
Lingulops norwoodi (James), Hayes and Ulrich, 533.
Linnarssoniacf. belti Davidson?, Matthew, 858.
Linuparus canadensis Whiteaves, Whiteaves, 1308.
vancouverensis Whiteaves, Whiteaves, 1308.
Liococcha Mörch, Dall, 261.
Liocyma Dall, 261.
Liospira micula (Hall), Weller, 1291.
strigata n. sp., Collie, 228.
 sp. undet., Weller, 1291.
Lirodiscus Conrad, Dall, 261.

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- Lirodiscus protractus* O. Meyer, Dall, 261.
wailesii n. sp., Dall, 261.
Lirophora Conrad, Dall, 261.
Lithodomus nitidus n. sp., Whiteaves, 1308.
Lithophaga Bolten, Arnold, 38.
plumula Hanley, Arnold, 38.
Littorina Ferussac, Arnold, 38.
planaxis (Nuttall) Philippi, Arnold, 38.
scutulata Gould, Arnold, 38.
Lonsdaleia (or *Lithostrotion*) *canadense* (Castelnau), Hayes and Ulrich, 533.
Lophophyllum profundum (Milne-Edwards and Haime), Beede, 64.
profundum Milne-Edwards and Haime, Girty, 455.
westi (Beede), Beede, 64.
Lophospira bispiralis Hall (sp.), Clarke and Ruedemann, 204.
medialis U. & S., Weller, 1291.
oweni U. & S., Weller, 1291.
Loripes Cuvier, Dall, 261.
Loxonema attenuata Hall, Weller, 1291.
danai n. sp., Clarke, 200.
delphicola Hall, mut. *moloch* Clarke, Loomis, 809.
jerseyensis n. sp., Weller, 1291.
multiplicatum n. sp., Clarke, 200.
noe Clarke, Clarke, 200.
parvum Cox?, Girty, 455.
? peoriense Worthen, Girty, 455.
plicatum Whitfield, Girty, 455.
? sp., Girty, 455.
sp. undet., Weller, 1291.
Loxopteria Frech, Clarke, 200.
(Sluzka) corrugata n. sp., Clarke, 200.
dispar Sandberger, Clarke, 200.
(Sluzka) intumescens n. sp., Clarke, 200.
laevis Frech, Clarke, 200.
vasta n. sp., Clarke, 200.
Loxoptychodon Sandberger, Dall, 261.
Lucapina Gray, Arnold, 38.
crenulata Sowerby, Arnold, 38.
Lucina Bruglière, Arnold, 38.
(Bruglière) Lamarck, Dall, 261.
acutilineata Conrad, Arnold, 38.
californica Conrad, Arnold, 38.
chrysostoma (Meuschen) Philippi, Dall, 261.
corpulenta n. sp., Dall, 261.
janus n. sp., Dall, 261.
nuttalli Conrad, Arnold, 38.
santarosana n. sp., Dall, 261.
scopularis n. sp., Casey, 178.
subvexa Conrad, Dall, 261.
tenuisculpta Carpenter, Arnold, 38.
vicksburgensis n. sp., Casey, 178.
sp. indet., Dall, 261.
Lucinella Monterosato, Dall, 261.
Luciniscia Dall, Dall, 261.
Lucinoma Dall, Dall, 261.
Ludovicica Cossmann, Dall, 261.
Lunatia Gray, Arnold, 38.
Lunulicardium Münster, Clarke, 200.
(Prochasma) absegmen n. sp., Clarke, 200.
(Pinnopsis) accola n. sp., Clarke, 200.

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- Lunulicardium* (Pinnopsis) *acutirostrum* Hall, Clarke, 200.
betushauseni n. sp., Clarke, 200.
(Prochasma) bickense Holzapfel, Clarke, 200.
clymeniae, Clarke, 198.
(Chaenocardiola) clymeniae n. sp., Clarke, 200.
encrinurum n. sp., Clarke, 200.
(Prochasma) enode n. sp., Clarke, 200.
(Chaenocardiola) erlense n. sp., Clarke, 200.
finitimum n. sp., Clarke, 200.
(Chaenocardiola) furcatum n. sp., Clarke, 200.
hemicardioides, Clarke, 198.
(Chaenocardiola) hemicardioides n. sp., Clarke, 200.
(Pinnopsis) libum n. sp., Clarke, 200.
mülleri, Clarke, 198.
(Pinnopsis) ornatum Hall, Clarke, 200.
(Prochasma) parunculus n. sp., Clarke, 200.
pilosum n. sp., Clarke, 200.
sodale n. sp., Clarke, 200.
suppar n. sp., Clarke, 200.
? (Opisthocoele) transversale n. sp., Clarke, 200.
velatum n. sp., Clarke, 200.
(Pinnopsis) wisconsinense n. sp., Clarke, 200.
n. sp., Clarke, 200.
n. sp.?, Clarke, 200.
Luzonia Dall and Smith, Dall, 261.
Lyonsia Turton, Arnold, 38.
Lyonsia Turton, Dall, 261.
section Allogramma Dall, Dall, 261.
section Philippina Dall, Dall, 261.
acuta n. sp., Dall, 261.
californica Conrad, Arnold, 38.
Lyria nestor n. sub-sp., Casey, 178.
Lysis succinea Whiteaves, Whiteaves, 1308.
Macoma Leach, Arnold, 38.
calcareo Gmelin, Arnold, 38.
indentata Carpenter, Arnold, 38.
inquinata Deshayes, Arnold, 38.
nasuta Conrad, Arnold, 38.
nasuta Conrad var. *keleyi* Dall, Arnold, 38.
secta Conrad, Arnold, 38.
yoldiformis Carpenter, Arnold, 38.
Macridiscus Dall, Dall, 261.
Macrocallista Meek, Dall, 261.
section Chionella Cossmann, Dall, 261.
section Macrocallista s. s., Dall, 261.
acuminata n. sp., Dall, 261.
albaria Say, Dall, 261.
(Chionella) maculata Linné, Dall, 261.
(Chionella) marylandica Conrad, Dall, 261.
nimbosa Solander, Dall, 261.
pittsburgensis Dall, Dall, 261.
reposita Conrad, Dall, 261.
Macrocephalites ishmæ Keyserling sp., Madsen, 836.
sp. cf. macrocephalus Schlothelm sp., Madsen, 836.
pompeckji n. sp., Madsen, 836.

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- Macrochilina hamiltoniae* Hall, mut. *pygmæa* Clarke, Loomis, 809.
hebe Hall, mut. *pygmæa* nov., Loomis, 809.
onondagaensis Clarke, Wilson, 1335.
pygmæa n. sp., Clarke, 200.
seneca n. sp., Clarke, 200.
 sp. indet., Clarke and Ruedemann, 204.
Macrodon obsoletus Meek, Beede, 64.
sangamonensis Worthen?, Beede, 64.
Macron H. and A. Adams, Arnold, 38.
kelletti A. Adams, Arnold, 38.
lividus A. Adams, Arnold, 38.
Mactra Linné, Arnold, 38.
californica Conrad, Arnold, 38.
(Spisula) catilliformis Conrad, Arnold, 38.
exoleta Gray, Arnold, 38.
(Spisula) falcata Gould, Arnold, 38.
hemphilli Dall, Arnold, 38.
Magnolia obtusata Heer, Berry, 76.
palæopetala n. sp., Hollick, 592.
tenuifolia Lesq., Berry, 76.
woodbridgensis Hollick, Berry, 76.
Marlopteris cordato-ovato obtusiloba n. var., White, 1296.
Majanthemophyllum grandifolium n. sp., Penhallow, 967.
Mangilia Risso, s. s., Arnold, 38.
Mangilia (Leach) Risso, Arnold, 38.
angulata Carpenter, Arnold, 38.
(Cythara) branneri n. sp., Arnold, 38.
(Clathurella) conradiana Gabb, Arnold, 38.
hooveri n. sp., Arnold, 38.
interfossa var. *pedroana* n. var., Arnold, 38.
interlirata Stearns, Arnold, 38.
oldroydi n. sp., Arnold, 38.
painei n. sp., Arnold, 38.
sculpturata Dall, Arnold, 38.
striosa C. B. Adams, Arnold, 38.
(Taranis) strongi n. sp., Arnold, 38.
Mantelliceras n. gen., Hyatt, 625.
Mantellum Adams, Arnold, 38.
Marcia H. and A. Adams, Dall, 261.
 section *Hemitapes* Römer, Dall, 261.
 section *Mercimonia* Dall, Dall, 261.
 section *Samarangia* Dall, Dall, 261.
 section *Textivenus* Cossmann, Dall, 261.
 section *Venerella* Cossmann, Dall, 261.
Margarita Leach, Arnold, 38.
optabilis Carpenter, var. *knechti* n. var., Arnold, 38.
optabilis Carpenter var. *nodosa* n. var., Arnold, 38.
parcipicta Carpenter, var. *pedroana* n. var., Arnold, 38.
pupilla Gould, Arnold, 38.
Margaritaria abrupta Conrad, Dall, 261.
Marginella Lamarck, Arnold, 38.
jewettii Carpenter, Arnold, 38.
(Volvarina) varia Sowerby, Arnold, 38.
Marginifera haydenensis n. sp., Girty, 455.
ingrata n. sp., Girty, 455.
lasallensis Worthen?, Girty, 455.

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- Marginifera muricata* Norwood and Pratten, Girty, 455.
wabashensis Norwood and Pratten var., Girty, 455.
Martesia? *parvula* n. sp., Whiteaves, 1308.
Mastodon, Douglass, 317.
Matheria brevis n. sp., Whiteaves, 1304.
Medlicottia, Waagen, Smith, 1137.
copei White, Smith, 1137.
Meckella striaticostata Cox, Girty, 455.
striaticostata (Cox), Beede, 64.
Meekopora Ulrich, Condra, 238.
prosseri Ulrich, Condra, 238.
Megablattina n. gen., Sellards, 1095.
beecheri n. sp., Sellards, 1095.
Megalneusaurus Knight, Williston, 1325.
Megambonia aviculoidea Hall, Weller, 1291.
bellistriata Hall, Weller, 1291.
parva n. sp., Weller, 1291.
 ? sp. undet., Weller, 1291.
Megapezia n. gen., Matthew, 859.
pincol, Matthew, 859.
Megistocrinus corniger, Rowley, 483.
expansus M. & G., Rowley, 485.
expansus var. *magniventrus* n. var., Rowley, 480.
expansus var. *magniventrus?*, Rowley, 483.
hemisphericus? M. & G., Rowley, 483.
oppelti n. sp., Rowley, 482.
rugosus L. & C., Rowley, 482.
rugosus var. *spinuliferus* n. var., Rowley, 480.
Melampus Montfort, Arnold, 38.
olivaceus Carpenter, Arnold, 38.
Melocrinus clarkel (Hall) Williams, Clarke, 200.
Menophyllum ulrichianum n. sp., Girty, 455.
Mercimonia Dall, Dall, 261.
Meretrix Lamarck, Dall, 261.
arata Gabb, Whiteaves, 1308.
Meristella lævis (Van.), Weller, 1291.
princeps Hall, Weller, 1291.
lata (Hall), Weller, 1291.
Merychys smithi n. sp., Douglass, 317.
Merycodus?, Douglass, 317.
 ? *necatus?* Leidy, Douglass, 317.
Mesoblastus Etheridge fil. and Carpenter, Hambach, 498.
Mesocyon? *drummondianus* n. sp., Douglass, 317.
Mesodon abasus Cragin, Williston, 1330.
Mesohippus latidens n. sp., Douglass, 317.
westoni Cope, Matthew, 863.
Mesostoma? *intermedium* n. sp., Whiteaves, 1308.
 ? *newcombii* n. sp., Whiteaves, 1308.
suciense n. sp., Whiteaves, 1308.
Metablastus bipyramidalis Hall, Rowley, 485.
nitidulus M. & G., Rowley, 481.
Metacheiromys marshi n. gen. and sp., Wortman, 1355.
Metamynodon?, Douglass, 317.
Metaplasia plicata n. sp., Weller, 1291.
pyxidata (Hall), Weller, 1291.
Metasigaloceras n. gen., Hyatt, 625.

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- Metatimotia* n. gen., Hyatt, 625.
Metatimoceras n. gen., Hyatt, 625.
 acutum n. sp., Hyatt, 625.
 ambiguum n. sp., Hyatt, 625.
 dumbli (Cragin), Hyatt, 625.
 inscriptum n. sp., Hyatt, 625.
 inscriptum var.?, Hyatt, 625.
Metis H. and A. Adams, Arnold, 38.
 alta Conrad, Arnold, 38.
Metoloceras n. gen., Hyatt, 625.
 acceleratum n. sp., Hyatt, 625.
 gibbosum n. sp., Hyatt, 625.
 swallowi (Shumard), Hyatt, 625.
 whitel n. sp., Hyatt, 625.
Metoptoma *amil* n. sp., Matthew, 857.
Metula *fastidiosa* n. sp., Casey, 178.
 fragilis n. sp., Casey, 178.
Meyeria? *harveyi* Woodward, Whiteaves, 1308.
Michelinia *eugenæ* White, Beede, 64.
 wardi n. sp., Greene, 482.
Microdiscus? sp. undet., Weller, 1291.
Microdrillia n. gen., Casey, 178.
 aldrichiella n. sp., Casey, 178.
 biplicatula n. sp., Casey, 178.
 [Pleurotoma] *cossmanni* Meyer, Casey, 178.
 elongatula n. sp., Casey, 178.
 [Glyphostoma] *harrisi* Ald., Casey, 178.
 [Pleurotoma] *infans* Meyer, Casey, 178.
 [Pleurotoma] *lerchi* Vgn, Casey, 178.
 minutissima n. sp., Casey, 178.
 robustula n. sp., Casey, 178.
 rostratula n. sp., Casey, 178.
 scutula n. sp., Casey, 178.
 vicksburgella n. sp., Casey, 178.
Micromeris Conrad, Dall, 261.
Micropternodus *borealis* n. gen. and sp., Matthew, 863.
Microstagon *Cossmann*, Dall, 261.
Microsyops *Leidy*, Wortman, 1355.
 annectens Marsh, Wortman, 1355.
 elegans Marsh, Wortman, 1355.
 gracilis Leidy, Wortman, 1355.
 schlosseri n. sp., Wortman, 1355.
Milleroceras *parrishi* Miller and Gurley, Smith, 1137.
Milneria Dall, Dall, 261.
Miltha H. and A. Adams, Dall, 261.
Miodontiscus Dall, Dall, 261.
Miodontopsis Dall, Dall, 261.
Mitra *Lamarck*, Arnold, 38.
 maura Swainson, Arnold, 38.
Mitromorpha A. Adams, Arnold, 38.
 filosa Carpenter, Arnold, 38.
 intermedia n. sp., Arnold, 38.
Mixodectes *Cope*, Wortman, 1355.
Mixosaurus, Merriam, 882.
Modiola sp.?, Clarke, 200.
Modiola cfr. *simplex* J. Sowerby, Ravn, 996.
 siskiyouensis Gabb, Whiteaves, 1308.
 subelliptica Meek, Beede, 64.
 ? *subelliptica* Meek, Girty, 455.
 (*Brachydontes*) sp. ind., Whiteaves, 1308.
 ? sp., Shattuck, 1098.

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- Modiolopsis* *depressa* n. sp., Weller, 1291.
 faba (Con.), Weller, 1291.
 jerseyensis n. sp., Weller, 1291.
 ? cf. *solvensis* Hicks, Matthew, 858.
Modiolus *Lamarck*, Arnold, 38.
 fornicatus Carpenter, Arnold, 38.
 rectus Conrad, Arnold, 38.
Mœrella *Fischer*, Arnold, 38.
Monia *Gray*, Arnold, 38.
Monilipora *prosseri* Beede, Girty, 455.
Monobolina *refulgens*, Matthew, 858.
Monoceros *Lamarck*, Arnold, 38.
 engonatum Conrad, Arnold, 38.
 lapilloides Conrad, Arnold, 38.
Monocladodus *Claypole*, Claypole, 206.
 clarki Claypole, Claypole, 206.
 pinnatus Claypole, Claypole, 206.
Monomorella *noveboracum* n. sp., Clarke and Ruedemann, 204.
Monopteria *alida* Beede, Girty, 455.
 longispina Cox, Girty, 455.
 polita White, Girty, 455.
Monotrypa *corrugata* n. sp., Weller, 1291.
 globosa n. sp., Weller, 1291.
 sphaerica (Hall), Weller, 1291.
Monotrypella *quadrata* (Rominger), Hayes and Ulrich, 533.
Monticulipora *molesta* Nicholson, Hayes and Ulrich, 533.
Mopalia *Gray*, Arnold, 38.
 ciliata Sowerby, Arnold, 38.
Moriconia *cyclotoxon* Deb. & Ett., Berry, 76.
Muensteroceras *Hyatt*, Smith, 1137.
 ? *holmesi* Swallow, Smith, 1137.
 ? *indianense* Miller, Smith, 1137.
 ? *morganense* Swallow, Smith, 1137.
 osagense Swallow, Smith, 1137.
 oweni Hall, Smith, 1137.
 parallelum Hall, Smith, 1137.
Murex *Linné*, Arnold, 38.
 (*Pteronotus*) *festivus* Hinds, Arnold, 38.
 (*Pterorhytis*) *foliatus* Martyn, Arnold, 38.
 (*Chicoreus*) *leeanus* Dall, Arnold, 38.
 (*Pterorhytis*) *monoceros* Sowerby, Arnold, 38.
 (*Pterorhytis*) *nuttalli* Conrad, Arnold, 38.
 (*Chicoreus*?) *trialatus* Sowerby, Arnold, 38.
Mustela? *minor* n. sp., Douglass, 317.
Musculium *Link*, Dall, 261.
Myalina *ampla* Meek and Hayden, Beede, 64.
 arkansasana Weller?, Girty, 455.
 congeneris Walcott, Beede, 64.
 cuneiformis Gurley, Girty, 455.
 ? *exasperata* Beede, Beede, 64.
 kansasensis Shumard, Beede, 64.
 keokuk Worthen, Girty, 455.
 perattenuata Meek and Hayden, Beede, 64.
 perattenuata Meek and Hayden?, Girty, 455.
 peruiformis Cox?, Girty, 455.
 subquadrata Shumard, Beede, 64.
 subquadrata Shumard?, Girty, 455.

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- Myalina swallovi* McChesney, Beede, 64.
wyomingensis Lea, Girty, 455.
- Mylacris* (*Dipeltis*) *diplodiscus*, Sellards, 1095.
- Mylagaulodon angulatus* n. gen. and sp., Sinclair, 1116.
- Mylagaulus* Cope, Douglass, 317.
- Mylagaulus paniensis?* Matthew, Douglass, 317.
- ? *pristinus* n. sp., Douglass, 317.
- proximus* n. sp., Douglass, 317.
- sp., Douglass, 317.
- Myoconcha grønlandica* n. sp., Madsen, 836.
- Myonera* Dall and Smith, Dall, 261.
- Myriapodites* sp., Matthew, 861.
- Myrica heerii* n. sp., Berry, 75.
- Myrsine crassa* Lesq., Berry, 76.
- Myrsus* H. and A. Adams, Dall, 261.
- Myrtæa* Turton, Dall, 261.
- section *Eulopia* Dall, Dall, 261.
- section *Myrtæa* s. s., Dall, 261.
- section *Myrteopsis* Sacco, Dall, 261.
- (*Eulopia*) *furcata* n. sp., Dall, 261.
- limoniana* n. sp., Dall, 261.
- (*Eulopia*) *vermiculata* n. sp., Dall, 261.
- Myrteopsis* Sacco, Dall, 261.
- Mysia* Leach, Dall, 261.
- Mytilarca acutirostrum* Hall, Clarke and Ruedemann, 204.
- eduliformis* n. sp., Clarke and Ruedemann, 204.
- obliqua* n. sp., Weller, 1291.
- Mytilimeria* Conrad, Arnold, 38.
- nuttalli* Conrad, Arnold, 38.
- Mytilus* (Linné) Bolten, Arnold, 38.
- affinis* J. Sowerby, Ravn, 996.
- edulis* Linné, Arnold, 38.
- pauperculus* Gabb, Whiteaves, 1308.
- Nassa* Lamarck, Arnold, 38.
- californiana* Conrad, Arnold, 38.
- cerritensis* n. sp., Arnold, 38.
- fossata* Gould, Arnold, 38.
- insculpta* Carpenter, Arnold, 38.
- mendica* Gould, Arnold, 38.
- mendica* Gould, var. *cooperi* Forbes, Arnold, 38.
- perpinguis* Hinds, Arnold, 38.
- tegula* Reeve, Arnold, 38.
- versicolor* C. B. Adams, var. *hooveri* n. var., Arnold, 38.
- Natica* (Adanson) Scopoli, Arnold, 38.
- (*Cryptonatica*) *clausa* Broderip and Sowerby, Arnold, 38.
- Naticopsis altonensis* McChesney, Girty, 455.
- monilifera* White, Girty, 455.
- Nautilus hilli* n. sp., Shattuck, 1098.
- texasus* Shumard, Shattuck, 1098.
- Næra* Gray, Arnold, 38.
- pectinata* Carpenter, Arnold, 38.
- Nelumbo primæva* n. sp., Berry, 76.
- Neocardia* Sowerby, Dall, 261.
- Neocrassina* Fischer, Dall, 261.
- Neohipparion whitneyi* n. gen. and sp., Gidley, 438.
- Nerinea dispar?* Gabb, var., Whiteaves, 1308.

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Genera and species described—Continued.

- Neuropteris carceraria* n. sp., White, 1296.
- hastata* n. sp., White, 1296.
- lindabli* n. sp., White, 1296.
- Neverita* Risso, Arnold, 38.
- Nicklesia* n. gen., Hyatt, 625.
- Nilsonia polymorpha* cretacea (Sch.), Penhallow, 967.
- Nodipecten* Dall, Arnold, 38.
- Nomismoceras* Hyatt, Smith, 1137.
- ? *monroense* Worthen, Smith, 1137.
- Norrisia* Bayle, Arnold, 38.
- norrisii* Sowerby, Arnold, 38.
- Nucleocrinus greeni* M. & G., Rowley, 481.
- verneuili* Troost, Rowley, 481.
- Nucleospira concinna* Hall, mut. *pygmæa* nov., Loomis, 809.
- ventricosa* Hall, Weller, 1291.
- Nucula* Lamarck, Arnold, 38.
- beyrichi* Geinitz, Beede, 64.
- (*Acila*) *castrensis* Hinds, Arnold, 38.
- corbuliformis* Hall, mut. *pygmæa* nov., Loomis, 809.
- hornbyensis* Whiteaves, Whiteaves, 1308.
- lirata* Conrad, mut. *pygmæa* nov., Loomis, 809.
- pulchella* Beede and Rogers, Beede, 64.
- richardsoni* Whiteaves, Whiteaves, 1308.
- similis* J. Sowerby, Ravn, 996.
- (*Nucula*) *suprastrata* Carpenter, Arnold, 38.
- (*Acila*) *truncata* Gabb, Whiteaves, 1308.
- varicosa* Hall, mut. *pygmæa* nov., Loomis, 809.
- ventricosa* Hall, Beede, 64.
- ? sp. undet., Weller, 1291.
- Nuculana bellistriata* (Stevens), Beede, 64.
- bellistriata attenuata* Meek, Beede, 64.
- Nuculites oblongatus* Conrad, mut. *pygmæus* nov., Loomis, 809.
- triqueter* Conrad, mut. *pygmæus* nov., Loomis, 809.
- Nuttallia* Dall, Arnold, 38.
- Nyctopora billingsi* Nich., Weller, 1291.
- Nyctosaurus* Marsh, Williston, 1326.
- gracilis* Marsh, Williston, 1326.
- Obolus* Eichwald, Matthew, 858.
- æquiputeis*, Matthew, 854.
- æquiputeis* n. sp., Matthew, 858.
- bretonensis*, Matthew, 854.
- discus*, Matthew, 854.
- discus* n. sp., Matthew, 858.
- ella* Hall and W., Matthew, 857.
- ella*, Matthew, 854.
- lens*, Matthew, 854.
- lens* n. sp., Matthew, 858.
- lens* var. *longus* n. var., Matthew, 858.
- lens-primus*, Matthew, 854.
- pristinus*, Matthew, 854.
- pulcher*, Matthew, 854.
- refulgens*, Matthew, 854.
- torrentis*, Matthew, 854.
- torrentis* n. sp., Matthew, 858.
- triparilis*, Matthew, 854.
- triparilis* n. sp., Matthew, 858.

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- Ocinebra* Leach, Arnold, 38.
barbarensis Gabb, Arnold, 38.
foveolata Hinds, Arnold, 38.
interfossa Carpenter, Arnold, 38.
keepi n. sp., Arnold, 38.
lurida Middendorf, Arnold, 38.
lurida Midd., var. *aspera* Baird, Arnold, 38.
lurida Midd., var. *cancellina* Philippi, Arnold, 38.
lurida Midd., var. *cerritensis* n. var., Arnold, 38.
lurida Midd., var. *munda* Carpenter, Arnold, 38.
micheli Ford, Arnold, 38.
perita Hinds, Arnold, 38.
poulsoni Nuttall, Arnold, 38.
Odontopleura parvula (Walc.)?, Weller, 1291.
Odontopteris papilionacea n. sp., White, 1296.
Odonstomia Fleming, Arnold, 38.
(Oscilla) æquisculpta Carpenter, Arnold, 38.
? *cretacea* n. sp., Whiteaves, 1308.
(Chrysalida) diegensis D. & B., n. sp., Arnold, 38.
? *inornata* n. sp., Whiteaves, 1308.
(Evalea) gouldii Carpenter, Arnold, 38.
(Oscilla) grammatozospira D. & B., n. sp., Arnold, 38.
(Amaura) nuciformis, var. *avellana* Carpenter, Arnold, 38.
(Amaura) pupiformis Carpenter, Arnold, 38.
(Evalea) stearnsii D. & B., n. sp., Arnold, 38.
tenuis Carpenter, Arnold, 38.
(Ivara) terricula (Carpenter) D. & B., Arnold, 38.
Ogmophus arenarum n. sp., Douglass, 317.
Olbodotes Osborn, Wortman, 1355.
Oleostephanus (? *Simbirskaia*) Paylow and Lamplugh n. sp., Madsen, 836.
Olenellus thompsoni (Hall), Weller, 1291.
? sp. und., Weller, 1291.
Oligoporus? *minutus* Beede, Beede, 64.
Oligosimus Leidy, Williston, 1325.
Olivianites, Hambach, 498.
Olivella Swainson, Arnold, 38.
affluens n. sp., Casey, 178.
biplicata Sowerby, Arnold, 38.
intorta Carpenter, Arnold, 38.
pedroana Conrad, Arnold, 38.
Omphalius Philippi, Arnold, 38.
Ontaria n. gen., Clarke, 200.
accincta n. sp., Clarke, 200.
affiliata n. sp., Clarke, 200.
clarkei Beushausen (sp.), Clarke, 200.
concentrica von Buch, Clarke, 200.
halli n. sp., Clarke, 200.
pontica n. sp., Clarke, 200.
suborbicularis Hall (sp.), Clarke, 200.
Opalia H. and A. Adams, Arnold, 38.
anomala Stearns, Arnold, 38.
borealis Gould, Arnold, 38.

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- Opalia crenatoides* Carpenter, var. *insculpta* Carpenter, Arnold, 38.
varicostata Stearns, Arnold, 38.
Ophileta complanata Vanuxem, Cleland, 208.
levata Vanuxem, Cleland, 208.
? sp. undet., Weller, 1291.
Ophthalmosaurus, Merriam, 882.
Orbiculoidea ampla (Hall), Weller, 1291.
convexa (Shumard), Beede, 64.
jervensis Barrett, Weller, 1291.
lamellosa (Hall), Weller, 1291.
manhattanensis (Meek and Hayden), Beede, 64.
manhattanensis Meek and Hayden, Girty, 455.
missouriensis (Shumard), Beede, 64.
Orbicella? *texana* n. sp., Vaughan, 1244.
Orbiculoidea sp., Girty, 455.
sp. undet., Weller, 1291.
Orbiculus Megerle, Dall, 261.
Oreodon macrorhinus n. sp., Douglass, 317.
Oricardinus sheari Cope, Hay, 517.
tortus Cope, Hay, 517.
Ornithoides n. gen., Matthew, 859.
Ornitholestes hermanni n. gen. and sp., Osborn, 945.
Ornithostoma, Langley, 766.
Ornithostoma, Lucas, 817.
Orodus intermedius n. sp., Eastman, 337.
Orophosaurus Cope, Williston, 1325.
Orthis flabellites Foerste, Weller, 1291.
lenticularis Dalman, Matthew, 858.
newtonensis n. sp., Weller, 1291.
(Dalmanella) testudinaria, Hayes and Ulrich, 533.
trienaria Conrad, Weller, 1291.
Orthisina alberta Walcott, Matthew, 857.
Orthoceras crebescens Hall, Clarke and Ruedemann, 204.
nuntium Hall, Loomis, 809.
primigenium Vanuxem, Cleland, 208.
rectum Worthen, Clarke and Ruedemann, 204.
scintilla Hall (?), mut. *mephisto* Clarke, Loomis, 809.
subulatum Hall, mut. *pygmaeum* nov., Loomis, 809.
tenuistriatum (Hall), Weller, 1291.
tenuitextum (Hall), Weller, 1291.
tristutum n. sp., Clarke and Ruedemann, 204.
sp. undet., Weller, 1291.
Orthodesma canaliculatum Ulrich, 1291.
Orthonychia formosa Keyes?, Girty, 455.
Orthostrophia strophomenoides (Hall), Weller, 1291.
Orthothetes deckerensis n. sp., Weller, 1291.
inaequalis Hall, Girty, 455.
interstriatus (Hall), Weller, 1291.
pandora (Bill.), Weller, 1291.
woolworthana (Hall), Weller, 1291.
sp. undet., Weller, 1291.
Orthotichia schuchertensis n. sp., Girty, 455.
Oryctomya clabornensis Dall, Dall, 261.

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Genera and species described—Continued.

- Oscilla A. Adams, Arnold, 38.
 Osmæroides Agassiz, Loomis, 808.
 evolutus Cope?, Loomis, 808.
 polymicrodus Stewart, Loomis, 808.
 Osmundites skidegatensis n. sp., Penhallow, 966.
 skidegatensis Penh., Penhallow, 967.
 Ostrea (Linné) Lamarck, Arnold, 38.
 anomioides var. nanus n. var., Johnson, 647.
 eduliformis Schlotheim, Madsen, 836.
 lugubris Conrad, Johnson, 647.
 lurida Carpenter, Arnold, 38.
 sp., Shattuck, 1098.
 Ovula symmetrica n. sp., Aldrich, 16.
 Oxydiscus cristatus Safford, Hayes and Ulrich, 533.
 subacutus Ulrich, Weller, 1291.
 Pachydiscus binodatus n. sp., Whiteaves, 1308.
 haradai Jimbo, Whiteaves, 1308.
 multisulcatus n. sp., Whiteaves, 1308.
 neevessil n. sp., Whiteaves, 1308.
 newberryanus Meek sp., Whiteaves, 1308.
 otacodensis Stoliczka sp., Whiteaves, 1308.
 (haradai? var.) perplicatus, Whiteaves, 1308.
 suciensis Meek sp., Whiteaves, 1308.
 Pachydesma Conrad, Dall, 261.
 Pachymya austiniensis (?) Shumard, Shattuck, 1098.
 Pachypoma Gray, Arnold, 38.
 inaequale Martyn, Arnold, 38.
 Pachyrhizodus Agassiz, Hay, 517.
 Pachyrhizodus Dixon, Loomis, 808.
 Pachyrhizodus Dixon, Stewart, 1186.
 caninus Cope, Hay, 517.
 caninus Cope, Loomis, 808.
 caninus, Cope, Stewart, 1186.
 curvatus n. sp., Loomis, 808.
 ferox Stewart, Loomis, 808.
 latimentum Cope, Loomis, 808.
 latimentum? Cope, Stewart, 1186.
 leptognathus Stewart, Loomis, 808.
 leptognathus Stewart, Stewart, 1186.
 leptopsis Cope, Hay, 517.
 leptopsis Cope, Loomis, 808.
 leptopsis Cope, Stewart, 1186.
 minimus Stewart, Stewart, 1186.
 shear! Cope, Loomis, 808.
 velox Stewart, Stewart, 1186.
 Palæarctomys n. gen., Douglass, 317.
 macrorhinus n. sp., Douglass, 317.
 montanus n. sp., Douglass, 317.
 Palæobolus, Matthew, 858.
 bretonensis, Matthew, 858.
 Palæochæta devonica nov., Clarke, 199.
 Palæochatteria Credner, Osborn, 948.
 Palæocorystes harveyi Woodward, Whiteaves, 1308.
 Palæolagus brachyodon, n. sp., Matthew, 863.
 temnodon Douglas, Matthew, 863.
 Palæomeryx? borealis?, Douglass, 317.
 Palæoneilo brevicula n. sp., Clarke, 200.
 constricta Conrad, Clarke, 200.
 constricta Conrad mut. pygmæa nov., Clarke, 809.

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Genera and species described—Continued.

- Palæoneilo emarginata (Con.), Weller, 1291.
 linguata n. sp., Clarke, 200.
 muricata n. sp., Clarke, 200.
 petila n. sp., Clarke, 200.
 plana Hall, mut. pygmæa nov., Loomis, 809.
 Palæotrochus Hall, Clarke, 200.
 præcursor Clarke, Clarke, 200.
 Paliurus integrifolius Hollick (?), Berry, 76.
 Paludestrina d'Orbigny, Arnold, 38.
 curta n. sp., Arnold, 38.
 stokesi n. sp., Arnold, 38.
 Pandora, Arnold, 38.
 Pandora Hwass, Dall, 261.
 (Kennerleyia) arctica n. sp., Dall, 261.
 (Kennerleyia) arenosa Conrad, Dall, 261.
 (Kennerleyia) bicarinata Carpenter, Arnold, 38.
 (Clidiophora) crassidens Conrad, Dall, 261.
 (Kennerleyia) dodona n. sp., Dall, 261.
 (Kennerleyia) filosa Carpenter, Arnold, 38.
 (Clidiophora) gouldiana Dall, Dall, 261.
 (Kennerleyia) lata n. sp., Dall, 261.
 (Heteroclidus) punctata Conrad, Dall, 261.
 (Clidiophora) trilineata Say, Dall, 261.
 Panomya Gray, Arnold, 38.
 ampla Dall, Arnold, 38.
 Panopea Ménard, Arnold, 38.
 concentrica Gabb, var., Whiteaves, 1308.
 generosa Gould, Arnold, 38.
 Pantosaurus Marsh, Williston, 1325.
 Paphia Bolten, Dall, 261.
 section Baroda Stoliczka, Dall, 261.
 section Callithaca Dall, Dall, 261.
 section Icanotia Stoliczka, Dall, 261.
 section Myrsus H. and A. Adams, Dall, 261.
 section Paphia Bolten s. s., Dall, 261.
 section Paratapes Dall, Dall, 261.
 section Polititapes Chimentif, Dall, 261.
 section Protapes Dall, Dall, 261.
 section Pullastra Sowerby, Dall, 261.
 section Ruditapes Chimentif, Dall, 261.
 section Tapes Megerle s. s., Dall, 261.
 Parabolina dawsoni, Matthew, 858.
 Parabolina? cf. limitis Brög., Matthew, 858.
 ? quadrata, Matthew, 858.
 Paracardium Barrande, Clarke, 200.
 delicatula n. sp., Clarke, 200.
 doris Hall, Clarke, 200.
 Paracanthus granulosus Vaughan, Vaughan, 1243.
 pedroensis Vaughan n. sp., Arnold, 38.
 Paracyclas lirata Conrad, mut. pygmæa nov., Loomis, 809.
 Paralegoceras Hyatt, Smith, 1137.
 baylorense White, Smith, 1137.
 iowense Meek and Worthen, Smith, 1137.
 newsomi n. sp., Smith, 1137.
 texanum Shumard, Smith, 1137.
 Paramylodon n. gen., Brown, 134.
 nebrascensis n. sp., Brown, 134.
 Paraptyx n. gen., Clarke, 200.
 ontario n. sp., Clarke, 200.
 Parasmilia texana n. sp., Vaughan, 1244.
 Parastarte Conrad, Dall, 261.
 triquetra Conrad, Dall, 261.

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- Parastarte hemiplicata (Hall), Weller, 1291.
 Parataptes Stoliczka, Dall, 261.
 Paratissotia n. gen., Hyatt, 625.
 Parmulina Dall, Dall, 261.
 Parvilucina Dall, Dall, 261.
 Patella sp., Shattuck, 1098.
 Patellostium bellum Keyes, Girty, 455.
 ourayense Gurley, Girty, 455.
 Patinopecten Dall, Arnold, 38.
 Pecopteris arboreascens (Schloth.) Brongn.,
 White, 1296.
 (Cheilanthes) sepulta Newb. (?), Hollick,
 591.
 Pecten Müller, Arnold, 38.
 (Pecten) bellus Conrad, Arnold, 38.
 (Patinopecten) caurinus Gould, Arnold,
 38.
 (Patinopecten) expansus Dall, Arnold, 38.
 (Pecten) dentatus Sowerby, Arnold, 38.
 · duplicicosta (?) Roemer, Shattuck, 1098.
 (Hinnites) giganteus Gray, Arnold, 38.
 (Chlamys) hastatus Sowerby, Arnold, 38.
 (Pecten) hemphilli Dall, Arnold, 38.
 (Chlamys) hericeus Gould, Arnold, 38.
 (Chlamys) hericeus var. strategus Dall,
 Arnold, 38.
 (Chlamys) jordani n. sp., Arnold, 38.
 (Chlamys) latauritus Conrad, Arnold, 38.
 (Chlamys) latauritus Con., var. fragilis
 n. var., Arnold, 38.
 (Chlamys) latauritus Con., var. mono-
 timeris Con., Arnold, 38.
 (Plagioctenium) newsomi n. sp., Arnold,
 38.
 (Chlamys) opuntia Dall, Arnold, 38.
 quinquecostatus? (Sowerby), Shattuck,
 1098.
 roemeri (Hill), Shattuck, 1098.
 (Pecten) stearnsi Dall, Arnold, 38.
 (Pseudamysium) subminutus n. sp., Ald-
 rich, 16.
 (Nodipecten) subnodosus Sowerby, Ar-
 nold, 38.
 (Plagioctenium) subventricosus Dall,
 Arnold, 38.
 texanus Roemer, Shattuck, 1098.
 (Plagioctenium) ventricosus Sowerby,
 Arnold, 38.
 sp., Madsen, 836.
 Pectunculus veatchii Gabb sp., Whiteaves,
 1308.
 Pelecypora Dall, Dall, 261.
 Pentacrinus sp. cf. andræ de Loriol, Madsen,
 836.
 Pentamerus circularis n. sp., Weller, 1291.
 Pentremites Say, Hambach, 498.
 abbreviatus Hambach, Hambach, 498.
 angustus n. sp., Hambach, 498.
 bradleyi Meek, Hambach, 498.
 calycinus Lyon, Rowley, 481.
 cherokeus? Troost, Rowley, 481.
 chesterensis Hambach, Rowley, 481.
 copoideus Hall, Hambach, 498.
 conoideus Hall, Rowley, 481.
 florealis v. Schlotheim, Hambach, 498.

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- Pentremites godoni De France, Rowley, 481.
 kirki n. sp., Hambach, 498.
 koninckanus Hall, Rowley, 481.
 leda Hall, Loomis, 809.
 obesus Lyon, Rowley, 481.
 obtusus n. sp., Hambach, 498.
 pyriformis Say, Hambach, 498.
 pyriformis Say, Rowley, 481.
 robustus Lyon, Rowley, 481.
 rusticus n. sp., Hambach, 498.
 serratus n. sp., Hambach, 498.
 sulcatus Roemer, Hambach, 498.
 sulcatus? Roemer, Rowley, 481.
 tulipaformis n. sp., Hambach, 498.
 turbinatus n. sp., Hambach, 498.
 sp.?, Rowley, 481.
 Peratherium titanelix n. sp., Matthew, 863.
 Pericyclus Mojsisovics, Smith, 1137.
 blairi Miller and Gurley, Smith, 1137.
 ? princeps de Koninck, Smith, 1137.
 Periploma Schumacher, Arnold, 38.
 Periploma Schumacher, Dall, 261.
 angulifera Philippi, Dall, 261.
 argentina Conrad, Arnold, 38.
 collardi Harris, Dall, 261.
 peralta Conrad, Dall, 261.
 Peripristis semicircularis (Newberry and
 Worthen), Eastman, 337.
 Perisphinctes sp. cf. panderi d'Orbigny, Mad-
 sen, 836.
 Petalodus Owen, Eastman, 337.
 alleghaniensis Leidy, Eastman, 337.
 (Chomatodus) arcuatus (St. John), East-
 man, 337.
 Petricola Lamarck, Arnold, 38.
 carditoides Conrad, Arnold, 38.
 (Petricolaria) cognata C. B. Adams,
 Arnold, 38.
 (Petricolaria) denticulata Sowerby, Ar-
 nold, 38.
 (Rupellaria) lamellifera Conrad, Arnold,
 38.
 Petricolaria Stoliczka, Arnold, 38.
 Phacoides Blainville, Dall, 261.
 section Bellucina Dall, Dall, 261.
 section Epilucina Dall, Dall, 261.
 section Gradilucina Cossmann, Dall, 261.
 section Parvilucina Dall, Dall, 261.
 section Pleurolucina Dall, Dall, 261.
 section Cavilucina Fischer, Dall, 261.
 (Bellucina) actinus n. sp., Dall, 261.
 (Lucinoma) acutilineatus Conrad, Dall,
 261.
 (Pleurolucina) amabilis Dall, Dall, 261.
 (Bellucina) amiantus Dall, Dall, 261.
 (Lucinoma) annulatus Reeve, Dall, 261.
 (Pseudomiltha) anodonta Say, Dall, 261.
 (Lucinisca) calhounensis n. sp., Dall, 261.
 (Miltha) caloosaensis Dall, Dall, 261.
 (Miltha) chipolanus n. sp., Dall, 261.
 (Miltha) clabornensis Conrad, Dall, 261.
 (Parvilucina) crenulatus Conrad, Dall,
 261.
 (Lucinisca) cribrarius Say, Dall, 261.
 (Here) densatus Conrad, Dall, 261.

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- Phacoides* (*Miltha*) *disciformis* Heilprin, Dall, 261.
domingensis n. sp., Dall, 261.
(*Pseudomiltha*) *floridanus* Conrad, Dall, 261.
(*Pseudomiltha*) *foremani* Conrad, Dall, 261.
(Here) *glenni* n. sp., Dall, 261.
(Here) *hamatus* n. sp., Dall, 261.
(*Miltha*) *heracleus*, n. sp., Dall, 261.
(*Miltha*) *hillsboroensis* Heilprin, Dall, 261.
(*Parvilucina*) *intensus* n. sp., Dall, 261.
(*Parvilucina*) *multilineatus* Tuomey and Holmes, Dall, 261.
(*Luciniscia*) *muricatus* Spengler, Dall, 261.
nassula var. *caloosana* Dall, Dall, 261.
(*Miltha*) *ocalanus* n. sp., Dall, 261.
(*Parvilucina*) *piluliformis* n. sp., Dall, 261.
(*Luciniscia*) *plesiolophus* Dall, Dall, 261.
(Here) *podagrinus* n. sp., Dall, 261.
(*Parvilucina*) *prunus* n. sp., Dall, 261.
(*Pleurolocina*) *quadriscostatus* n. sp., Dall, 261.
(*Cavilucina*) *recurrens* n. sp., Dall, 261.
(Here) *richthofeni* Gabb, Dall, 261.
(*Parvilucina*) *sphaeriolus* n. sp., Dall, 261.
(Here) *tithonis* n. sp., Dall, 261.
trisulcatus var. *multistriatus* Conrad, Dall, 261.
(*Bellucina*) *tuomeyi* n. sp., Dall, 261.
(*Bellucina*) *waccamawensis* n. sp., Dall, 261.
(Here) *wacissanus* n. sp., Dall, 261.
(*Parvilucina*) *yaquensis* Gabb, Dall, 261.
(Here) sp. indet., Dall, 261.
Phacops *logani* Hall, Weller, 1291.
rana (Green), Weller, 1291.
? sp. undet., Weller, 1291.
Phandella n. gen., Casey, 178.
nepionica n. sp., Casey, 178.
Phanerotrema cf. *grayvillense* Norwood and Pratten, Girty, 455.
sp., Girty, 455.
Phaneta? *decorata* n. sp., Whiteaves, 1308.
Phasianella *Lamarck*, Arnold, 38.
compta Gould, Arnold, 38.
Phialocrinus magnificus (Miller and Gurley), Beede, 64.
Philippina Dall, Dall, 261.
Phillipsia *major* Shumard, Girty, 455.
perocidens Hall and Whitfield, Girty, 455.
trinucleata Herrick, Girty, 455.
Phœbodus dens-neptuni n. sp., Eastman, 337.
knightsianus n. sp., Eastman, 337.
Pholadidea *Goodall*, Arnold, 38.
(Here) *penita* Conrad, Arnold, 38.
Pholadomya angustata Sowerby sp., Madsen, 836.
claibornensis Meyer and Aldrich, Dall, 261.
marylandica Conrad, Dall, 261.
roemeri, n. sp., Shattuck, 1098.

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- Pholidops arenaria* Hall?, Weller, 1291.
ovata Hall, Weller, 1291.
Phorcus *Risso*, Arnold, 38.
pulligo Martyn, Arnold, 38.
Phos falsus n. sp., Casey, 178.
macilentus n. sp., Casey, 178.
Phragmites (?) *cliffwoodensis* n. sp., Berry, 76.
Phragmoceras parvum Hall and Whitfield, Clarke and Ruedemann, 204.
Phragmolites compressus Con., Weller, 1291.
Phragmostoma Hall, Clarke, 200.
chautauque n. sp., Clarke, 200.
incisum Clarke, Clarke, 200.
natator Hall, Clarke, 200.
cf. *triliratum* Hall (sp.), Clarke, 200.
Phylloceras ramosum Meek, Whiteaves, 1308.
Phylloporina fenestrata (Hall), Weller, 1291.
Phymesoda Rafinesque, Dall, 261.
Physa Draparnaud, Arnold, 38.
heterostropha Say, Arnold, 38.
Physonemus arcuatus M'Coy, Eastman, 337.
asper nom. nov., Eastman, 337.
gemmatus (Newberry and Worthen), Eastman, 337.
hamus-piscatorius n. sp., Eastman, 337.
pandatus n. sp., Eastman, 337.
stellatus (Newberry and Worthen), Eastman, 337.
Pinna peracuta Shumard, Beede, 64.
subspatulata Worthen, Beede, 64.
sp., Shattuck, 1098.
Pinnatopora *Vine*, Condra, 238.
trilineata (Meek), Condra, 238.
pyriformipora Rogers, Condra, 238.
youngi Ulrich, Condra, 238.
Pinnopsis Hall, Clarke, 200.
Pinus mattewanensis n. sp., Berry, 75.
Piptomerus *Cope*, Williston, 1325.
Piratosaurus *Leidy*, Williston, 1325.
Pisania *Bivona*, Arnold, 38.
fortis Carpenter, Arnold, 38.
Pisidium *C. Pfeiffer*, Dall, 261.
Pitaria *Roemer* (em.), Dall, 261.
section *Hyphantosoma* Dall, Dall, 261.
section *Lamelliconcha* Dall, Dall, 261.
section *Pitaria* s. s., Dall, 261.
section *Tivelina* *Cossmann*, Dall, 261.
(*Lamelliconcha*) *astartiformis* Conrad, Dall, 261.
(*Lamelliconcha*) *calcanea* n. sp., Dall, 261.
(*Hyphantosoma*) *carbacea* Guppy, Dall, 261.
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? depressus n. sp., Weller, 1291.
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? spinosa n. sp., Weller, 1291.
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? compactus Meek and Worthen, Smith, 1137.
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hawni equistriata Beede, Beede, 64.
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? robusta Beede, Beede, 64.
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? sp. undet., Weller, 1291.
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cashaque n. sp., Clarke, 200.
elmensis n. sp., Clarke, 200.
fragilis Hall (sp.), Clarke, 200.
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calcifera Walcott?, Weller, 1291.
newtonensis n. sp., Weller, 1291.
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Pyrgisculus Monterosato, Arnold, 38.
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Rhinidictya sp. undet., Weller, 1291.
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 (?) *litchfieldensis* n. sp., Schuchert, 1089.
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 semiplicata (Con.), Weller, 1291.
 suciensis Whiteaves, Whiteaves, 1308.
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Rhynchospira excavata n. sp., Grabau, 465.
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Rhynchotrema dentata (Hall), Weller, 1291.
 formosa (Hall), Weller, 1291.
 formosa (Hall)?, Weller, 1291.
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Romingeria commutata n. sp., Beecher, 63.
 jacksoni n. sp., Beecher, 63.
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 ? *trentonensis* n. sp., Weller, 1291.
 umbellifera (Billings), Beecher, 63.
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Sagenodus cristatus n. sp., Eastman, 337.
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Salix mattewanensis n. sp., Berry, 76.
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Sandalodus carbonarius Newberry and Worthen, Eastman, 337.
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Sanguinolaria (Nuttallia) *nuttalli* Conrad, Arnold, 38.
Sapindus morrisoni Lesq., Berry, 76.
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Saurocephalus Harlan, Hay, 517.
Saurocephalus Harlan, Loomis, 808.
Saurocephalus Harlan, Stewart, 1186.
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Saxidomus Conrad, Arnold, 38.
Saxidomus Conrad, Dall, 261.
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 bellastriata Carpenter, Arnold, 38.
 crebricostata Carpenter, Arnold, 38.
 indianorum Carpenter, Arnold, 38.
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Scaphiocrinus ? *washburni* Beede, Beede, 64.
Scaphites *warreni* M. and H., Johnson, 647.
Scenidium *anthonensis* Sard., Weller, 1291.
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Schizocrania *superincreta* Barrett, Weller, 1291.
Schizodus *compressus* n. sp., Beede, 64.
 cuneatus Meek ?, Girty, 455.
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 ? *acuta*, Matthew, 858.
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 ? *pervetus* mut. *concinna* n. mut., Matthew, 858.
Schuchertites n. gen., Smith, 1137.
 grahami n. sp., Smith, 1137.
Scylliorhinus (Lamna ?) *gracilis* Williston, Williston, 1330.
Sciurus *arctomyoides* n. sp., Douglass, 317.
 (*Prosciurus*) *vetustus* n. subg. and sp., Matthew, 863.
 sp., Douglass, 317.
Scobinella *famelica* n. sp., Casey, 178.
 macer n. sp., Casey, 178.
 pluriplicata n. sp., Casey, 178.
Scurria ? *coniformis* n. sp., Johnson, 647.
Scutella Lamarck, Arnold, 38.
 (*Echinarachnius*) *excentricus* Eschscholtz, Arnold, 38.

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Genera and species described—Continued.

- Scylliorhinus* *planidens* Williston, Williston, 1330.
 rugosus (Williston), Williston, 1330.
Scytalocrinus *ornatissimus* Hall (sp.), Clarke, 200.
Sedgwickia *topekaensis* (Shumard), Beede, 64.
Seila A. Adams, Arnold, 38.
 assimilata C. B. Adams, Arnold, 38.
Semele Schumacher, Arnold, 38.
 decisa Conrad, Arnold, 38.
 pulchra Sowerby, Arnold, 38.
 pulchra Sowerby, *montereyi* n. var., Arnold, 38.
Seminula *argentea* (Shephard), Beede, 64.
 claytoni Hall and Whitfield, Girty, 455.
 humilis Girty ?, Girty, 455.
 subquadrata Hall ?, Girty, 455.
 subtilita Hall, Girty, 455.
Semionotus *fultus* Agassiz, Eaton, 340.
 marshi W. C. Redfield, Eaton, 340.
 micropterus Newberry, Eaton, 340.
 ovatus W. C. Redfield, Eaton, 340.
 tenuiceps Agassiz, Eaton, 340.
Septifer, Recluz, Arnold, 38.
 bifurcatus Conrad, Arnold, 38.
Septopora Prout, Condra, 238.
 biserialis (Swallow), Condra, 238.
 biserialis-nervata Ulrich, Condra, 238.
 cestriensis Prout, Condra, 238.
 decipiens Ulrich, Condra, 238.
 multipora (Rogers), Condra, 238.
 pinnata Ulrich, Condra, 238.
 robusta Ulrich, Condra, 238.
Sequoia *burgessii* n. sp., Penhallow, 968.
 gracillima (Lesq.) Newb., Berry, 76.
 langsдорffii (Brongn.) Heer, Penhallow, 967, 968.
 reichenbachii (Gein.) Heer, Berry, 76.
Serpulorbis Sassi, Arnold, 38.
 squamigerus Carpenter, Arnold, 38.
 (*Vermicularia*) sp. indet., Arnold, 38.
Sharpeiceras n. gen., Hyatt, 625.
Shastasaurus, Merriam, 882.
Shizocrania *filosa* (Hall), Weller, 1291.
Shumardites n. gen., Smith, 1137.
 simondsi n. sp., Smith, 1137.
Sigaretus Lamarck, Arnold, 38.
 debilis Gould, Arnold, 38.
Sigillaria *brardii* *coriacea* n. var., White, 1296.
 suspecta n. sp., White, 1296.
Siliqua Megerle, Arnold, 38.
 lucida Conrad, Arnold, 38.
 patula (Dixon) var. *nuttalli* Conrad, Arnold, 38.
Siphonalia A. Adams, Arnold, 38.
 kellettii Forbes, Arnold, 38.
Smilodectes n. gen., Wortman, 1355.
 gracilis Marsh, Wortman, 1355.
Solanderina Dall, Dall, 261.
Solariella S. Wood, Arnold, 38.
 cidaris A. Adams, Arnold, 38.
 (*radiatula* ? var.) *occidentalis*, Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Solaritella peramabilis* Carpenter, Arnold, 38.
Solen Linné, Arnold, 38.
cuneatus Gabb?, Johnson, 647.
rosaceus Carpenter, Arnold, 38.
sicarius Gould, Arnold, 38.
Soleniscus cf. *paludiniformis* Hall, Girty, 455.
Solenomya parallella Beede and Rogers, Beede, 64.
radiata Meek and Worthen, Beede, 64.
trapezoides Meek, Beede, 64.
Solenopleura bretonensis n. sp., Matthew, 858.
jerseyensis Weller, Weller, 1291.
Somphospongia Beede, Beede, 64.
multiformis Beede, Beede, 64.
Spaniodon simus Cope, Hay, 517.
Sphaeristrum Beurguignat, Dall, 261.
Sphaerium Scopoli, Dall, 261.
Sphaerocystites Hall, Schuchert, 1091.
globularis n. sp., Schuchert, 1091.
Sphaerophthalmus alatus Boeck, Matthew, 858.
fletcheri, Matthew, 858.
Spheniopsis Sandberger, Dall, 261.
americana n. sp., Dall, 261.
Sphenodiscus Meek, Hyatt, 625.
beecheri n. sp., Hyatt, 625.
lenticularis (Owen), Hyatt, 625.
lenticularis var. *mississippiensis*, Hyatt, 625.
lenticularis var. *splendens*, Hyatt, 625.
lobatus (Tuomey), Hyatt, 625.
pleurisepta (Conrad), Hyatt, 625.
stantoni n. sp., Hyatt, 625.
Sphenodon Günther, Osborn, 948.
Sphenophyllum emarginatum minor D. W., White, 1296.
Spirifer, Sowerby, Beede, 64.
arenosus (Con.), Weller, 1291.
audaculus (Con.)?, Weller, 1291.
boonensis Swallow?, Girty, 455.
cameratus Morton, Beede, 64.
cameratus Morton, Girty, 455.
centronatus Winchell, Girty, 455.
concinus Hall, Weller, 1291.
corallinensis Grabau, Grabau, 465.
crispus (Hisinger) Hall, Clarke and Ruedemann, 204.
cyclopterus Hall, Weller, 1291.
eriensis Grabau, Schuchert, 1089.
eriensis Grabau var., Grabau, 465.
fimbriatus Courad, mut. *pygmæus* nov., Loomis, 809.
fimbriatus Conrad, mut. *simplicissimus* nov., Loomis, 809.
granulosus Conrad, mut. *pluto* Clarke, Loomis, 809.
macropleurus (Con.), Weller, 1291.
macrothyris Hall, Weller, 1291.
marcey Hall, mut. *pygmæus* nov., Loomis, 809.
medialis Hall, mut. *pygmæus* nov., Loomis, 809.
modestus corallinensis (Grabau), Schuchert, 1089.
mucronatus Conrad, mut. *hecate* Clarke, Loomis, 809.

Paleontology—Continued.

Genera and species described—Continued.

- Spirifer purchisoni* Castelnau, Weller, 1291.
nearpassi n. sp., Weller, 1291.
octocostatus Hall, Weller, 1291.
perlamellosus Hall, Weller, 1291.
peculiaris Shumard?, Girty, 455.
rockymontanus Marcou, Girty, 455.
tullius Hall, mut. *belphegor* Clarke, Loomis, 809.
vanuxemi Hall, Grabau, 465.
vanuxemi Hall, Weller, 1291.
vanuxemi Hall, var. *minor* n. var., Weller, 1291.
sp., Girty, 455.
sp. undet., Weller, 1291.
Spiriferina campestris White, Girty, 455.
cristata (Schlotheim), Beede, 64.
kentuckyensis Shumard, Girty, 455.
solidirostris White?, Girty, 455.
Spiroglyphus lituella Mörch, Arnold, 38.
Spirorbis arietina Dawson, Girty, 455.
sp., Girty, 455.
Spirotropsis Sars, Arnold, 38.
Spisula Gray, Arnold, 38.
Spondylus (sp. uncertain), Whiteaves, 1308.
sp., Shattuck, 1098.
Squamularia Gemmellaro, Girty, 455.
perplexa McChesney, Girty, 455.
Stantonoceras n. gen., Johnson, 647.
pseudocostatum n. sp., Johnson, 647.
guadaloupe Roemer (sp.)?, Johnson, 647.
Stemmatocrinus? *veryi* n. sp., Rowley, 482.
Stenopora Lonsdale, Condra, 238.
carbonaria (Worthen), Condra, 238.
carbonaria-conferta Ulrich, Condra, 238.
cestriensis Ulrich, Girty, 455.
distans Condra, Condra, 238.
heteropora Condra, Condra, 238.
? polyspinosa (provisional) Condra, Condra, 238.
spinulosa Rogers, Condra, 238.
tuberculata (Prout), Condra, 238.
tuberculata, Prout, Girty, 455.
? sp., Girty, 455.
Stenopteris (?) *cretacea* n. sp., Hollick, 591.
Stephanocrinus deformis n. sp., Rowley, 480.
gemmaformis Hall, Rowley, 480.
hammelli Miller, Rowley, 480.
oegoodensis Miller, Rowley, 480.
quinquepartitus n. sp., Rowley, 480.
Sterculia cliffwoodensis n. sp., Berry, 76.
mucronata Lesq., Berry, 76.
snowii bilobata var. nov., Berry, 76.
Stereosternum Cope, Osborn, 948.
Stethacanthus Newberry, Eastman, 337.
altonensis (St. John and Worthen), Eastman, 337.
depressus (St. John and Worthen), Eastman, 337.
erectus n. sp., Eastman, 337.
productus Newberry, Eastman, 337.
Stibarus montanus n. sp., Matthew, 863.
Straparollus luxus White, Girty, 455.
ophirensis Hall and Whitfield, Girty, 455.
cf. spergenensis Hall, Girty, 455.
utahensis Hall and Whitfield, Girty, 455.
sp. undet., Weller, 1291.

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Genera and species described—Continued.

- Stratodus* Cope, Stewart, 156.
apicalis Cope, Stewart, 156.
oxygonus Cope, Hay, 517.
Streblodus angustus n. sp., Eastman, 357.
Streblopteria media Herrick, Girty, 455.
tenuilineata Meek and Worthen, Girty, 455.
Streblotrypa Ulrich, Condra, 239.
priseri Gabb and Horn, Condra, 239.
Streptelasma corniculum Hall, Weller, 1291.
strictum Hall, Weller, 1291.
Striatopora bellistriata n. sp., Greene, 421, 422.
Striotreronella Sacco, Arnold, 38.
Stromatocerium pustulosum Safford, Hayes and Ulrich, 533.
Stromatopora constellata Hall, Schuchert, 1099.
galtensis Dawson, sp., Clarke and Ruedemann, 204.
Strongylocentrotus Brandt, Arnold, 38.
franciscanus A. Agassiz, Arnold, 38.
purpuratus Stimpson, Arnold, 38.
Strophalosia truncata Hall, mut. *pygmaea* nov., Loomis, 809.
Strophodonta beckeri Hall, Weller, 1291.
bipartita Hall, Weller, 1291.
indenta (Con.), Weller, 1291.
inequitradiata Hall, Weller, 1291.
magnifica (Hall), Weller, 1291.
perplana (Con.), Weller, 1291.
planulata Hall, Weller, 1291.
varistriata (Con.), Weller, 1291.
varistriata var. *arata* H., Weller, 1291.
sp. undet., Weller, 1291.
Strophomena Rafinesque, Nickles, 932.
incurvata (Shep.), Weller, 1291.
planoconvexa Hall, Hayes and Ulrich, 533.
planumbona (Hall), Nickles, 932.
Strophonella levenworthana (Hall), Weller, 1291.
punctilifera (Con.), Weller, 1291.
Strophostylus gebhardi (Con.), Weller, 1291.
cf. nanus Meek and Worthen, Girty, 455.
remex White, Girty, 455.
subovatus Worthen?, Girty, 455.
? sp. undet., Weller, 1291.
Stylemys calaverensis n. sp., Sinclair, 1117.
Styliferina A. Adams, Arnold, 38.
Styliolina fissurella Hall, Clarke, 200.
Styracoceras n. gen., Hyatt, 625.
Subpulchellia n. gen., Hyatt, 625.
Subtissotia n. gen., Hyatt, 625.
Sunetta Link, Dall, 261.
section Solanderina Dall, Dall, 261.
section Sunetta s. s., Dall, 261.
section Sunettina Jousseau, Dall, 261.
Sunettina Jousseau, Dall, 261.
Syllæmus Cope, Stewart, 1186.
latifrons Cope, Stewart, 1186.
Syntegmodus n. gen., Loomis, 808.
altus n. sp., Loomis, 808.
Syntrophia lateralis (Whitf.), Weller, 1291.
Syringopora aculeata Girty, Girty, 455.

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Genera and species described—Continued.

- Syringopora infundibulum* Whitfield, Clarke and Ruedemann, 204.
multitenuata McChesney, Beede, 64.
sureularia Girty, Girty, 455.
Syringothyris carteri Hall, Girty, 455.
Taniopteris orvillei Fontaine, Penhallow, 967.
Tagelus Gray, Arnold, 38.
californianus Conrad, Arnold, 38.
Talpa ? *platybrachys* n. sp., Douglass, 317.
Tancredia sp. cf. *angulata* Lycett, Madsen, 836.
sp., Madsen, 836.
Tapes Megerie, Arnold, 38.
Tapes Megerie, Dall, 261.
laciniata Carpenter, Arnold, 38.
staminea Conrad, Arnold, 38.
tenerrima Carpenter, Arnold, 38.
Taranis Jeffreys, Arnold, 38.
Taxodium distichum Rich., Penhallow, 968.
Tegoceras n. gen., Hyatt, 625.
Tellina (Angelus) *bodegensis* Hinds, Arnold, 38.
(Angelus) burtoni Dall, Arnold, 38.
(Angelus) ida Dall, Arnold, 38.
nanaimoensis n. sp., Whiteaves, 1308.
pilsbryi n. sp., Casey, 178.
(Angelus) rubescens Hanley, Arnold, 38.
(Morella) salmonea Carpenter, Arnold, 38.
sp., Ravn, 996.
Tellinocyclas Dall, Dall, 261.
Tentaculites acula Hall?, Weller, 1291.
bellulus Hall (?), mut. *stebos* Clarke, Loomis, 809.
elongatus Hall, Weller, 1291.
gracillistriatus Hall, Clarke, 200.
gracillistriatus Hall, mut. *asmodeus* Clarke, Loomis, 809.
gyracanthus (Eaton), Weller, 1291.
tenuicinctus F. A. Roemer, Clarke, 200.
Terebra Bruguière, Arnold, 38.
(Acus) simplex Carpenter, Arnold, 38.
Terebratalia Beecher, Arnold, 38.
hemphilli Dall, Arnold, 38.
smithi n. sp., Arnold, 38.
Terebratella harveyi n. sp., Whiteaves, 1308.
Terebratula (Chlidonophora) filosa Conrad, Dall, 261.
wilmingtonensis Lyell and Sowerby, Dall, 261.
Teredo sp., Ravn, 996.
Tetradella (?) sp., Jones, 656.
Tetragonites timotheanus? Mayor, Whiteaves, 1308.
Tetranota bidorsata (Hall), Weller, 1291.
Textivenos Cossmann, Dall, 261.
Thalotia Gray, Arnold, 38.
caffea Gabb, Arnold, 38.
Thamniscus King, Condra, 238.
palmaris (provisional) Condra, Condra, 238.
pinnatus Condra, Condra, 238.
sevillensis Ulrich, Condra, 238.

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Genera and species described—Continued.

- Thecalia H. and A. Adams, Dall, 261.
 Theranopus (?) mcnaughtoni n. sp., Matthew, 861.
 Theropleura uniformis, Case, 176.
 Thetironia Stoliczka, Dall, 261.
 Thoracoceras wilsoni Clarke, Wilson, 1835.
 Thracia (Leach) Blainville, Arnold, 38.
 Thracia Blainville, Dall, 261.
 section Ixartia Leach, Dall, 261.
 section Thracia s. s., Dall, 261.
 conradi Couthouy, Dall, 261.
 dilleri Dall, Dall, 261.
 transversa Lea, Dall, 261.
 trapezoides Conrad, Arnold, 38.
 Thryptodus n. gen., Loomis, 808.
 rotundus n. sp., Loomis, 808.
 zitteli n. sp., Loomis, 808.
 Thyasira (Leach) Lamarck, Dall, 261.
 section Axinulus Verrill and Bush, Dall, 261.
 section Thyasira s. s., Dall, 261.
 bisecta Conrad, Arnold, 38.
 bisepta Conrad, Dall, 261.
 flexuosa Montagu, Dall, 261.
 gouldi Philippi, Arnold, 38.
 trisinuata Orbigny, Dall, 261.
 Timoclea Brown, Dall, 261.
 Tivela Link, Arnold, 38.
 Tivela Link, Dall, 261.
 section Eutivela Dall, Dall, 261.
 section Pachydesma Conrad, Dall, 261.
 section Tivela s. s., Dall, 261.
 crassatelloides Conrad, Arnold, 38.
 jamaicensis n. sp., Dall, 261.
 (Pachydesma) stultorum Mawe, Dall, 261.
 Tivelina Cossman, Dall, 261.
 Tolypeceras n. gen., Hyatt, 625.
 Toretoenemus n. gen., Merriam, 882.
 californicus n. sp., Merriam, 882.
 Tornatina A. Adams, Arnold, 38.
 cerealis Gould, Arnold, 38.
 culcitella Gould, Arnold, 38.
 eximia Baird, Arnold, 38.
 harpa Dall, Arnold, 38.
 Tornoceras cinctum Keyserling, Clarke, 200.
 unilingulare Conrad, Loomis, 809.
 unilingulare Conrad, mut. astarte Clarke, Loomis, 809.
 Trachycardium Mörch, Arnold, 38.
 Trachypora austini Worthen, Beede, 64.
 oriskania n. sp., Weller, 1291.
 Transennella Dall, Dall, 261.
 caloosana n. sp., Dall, 261.
 carolinensis n. sp., Dall, 261.
 chipolana n. sp., Dall, 261.
 santarosana n. sp., Dall, 261.
 utica n. sp., Dall, 261.
 Trapezium (Humphrey) Mühlfield, Dall, 261.
 claibornense Dall, Dall, 261.
 Trematonotus alpheus Hall, Clarke and Ruedemann, 204.
 Trematospira multistriata Hall, Weller, 1291.
 Trens Gray, Arnold, 38.
 nuttalli Conrad, Arnold, 38.

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Genera and species described—Continued.

- Trianaspis Cope, Hay, 517.
 virgatus Cope, Hay, 517.
 Triarthrus belli, Matthew, 858.
 Triceratops, Beasley, 62.
 serratus Marsh, Lull, 818
 Tridonta Schumacher, Dall, 261.
 Triforis Deshayes, Arnold, 38.
 adversa Montagu, Arnold, 38.
 Trigenicus socialis n. gen. and sp., Douglass, 817.
 Trigeria lepida Hall, mut. pygmæa nov., Loomis, 809.
 Trigonina emoryi Conrad, Shattuck, 1098.
 evansana Meek, Whiteaves, 1308.
 undulata Fromherz, Madsen, 836.
 Trinacromerum Cragin, Williston, 1325.
 Trinucleus concentricus (Eaton), Weller, 1291.
 Tritonium Link, Arnold, 38.
 cerrillosensis n. sp., Johnson, 648.
 gibbosus Broderip, Arnold, 38.
 kanabense Stanton, Johnson, 647.
 (Priene) oregonensis Redfield, Arnold, 38.
 Trivia Gray, Arnold, 38.
 californica Gray, Arnold, 38.
 solandri Gray, Arnold, 38.
 Trochactæon semicostatus n. sp., Whiteaves, 1308.
 Trochoceras costatum Hall, Clarke and Ruedemann, 204.
 desplainei McChesney, Clarke and Ruedemann, 204.
 Trochonema cf. fatuum Hall, Clarke and Ruedemann, 204.
 Trochosmilia (?) sp. indet., Vaughan, 1244.
 Trochus sp., Shattuck, 1098.
 Trophon Montfort, Arnold, 38.
 (Boreotrophon) cerritensis n. sp., Arnold, 38.
 (Boreotrophon) gracilis Perry, Arnold, 38.
 (Boreotrophon) multicostatus Eschscholtz, Arnold, 38.
 (Boreotrophon) pedroana n. sp., Arnold, 38.
 (Boreotrophon) scalariformis Gould, Arnold, 38.
 (Boreotrophon) stuarti Smith, Arnold, 38.
 (Boreotrophon) stuarti Smith, var præcursor new var., Arnold, 38.
 (Boreotrophon) tenuisculptus Carpenter, Arnold, 38.
 (Boreotrophon) triangulatus Carpenter, Arnold, 38.
 Tropidocyclus Dall, Dall, 261.
 Tropidocyclus De Koninck, Clarke, 200.
 hyalinus n. sp., Clarke, 200.
 Tropidoleptus carinatus (Con.), Weller, 1291.
 carinatus Conrad, mut. pygmæus nov., Loomis, 809.
 Tropidomya Dall and Smith, Dall, 261.
 Tryblidium patulum n. sp., Cleland, 208.
 Turbonilla Risso, Arnold, 38.
 (Pyrgolampros) adleri D. & B., n. sp., Arnold, 38.

Paleontology—Continued.*Genera and species described—Continued.*

- Turbonilla* (*Pyrgolampros*) *arnoldi* D. & B., n. sp., Arnold, 38.
 (*Lancea*) *aurantia* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *auricomma* D. & B., n. sp., Arnold, 38.
 (*Pyrgiscus*) *crebriflata* Carpenter, Arnold, 38.
 (*Pyrgolampros*) *gibbosa* Carpenter, Arnold, 38.
 (*Pyrgisculus*) *laminata* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *latifundia* D. & B., n. sp., Arnold, 38.
 (*Pyrgolampros*) *lowei* D. & B., n. sp., Arnold, 38.
 (*Pyrgolampros*) *lowei*, var. *pedroana* D. & B., n. sp., Arnold, 38.
 (*Strioturbonilla*) *muricata* Carpenter, Arnold, 38.
 (*Lancea*) *pentalopha* D. & B., n. sp., Arnold, 38.
 (*Strioturbonilla*) *similis* C. B. Adams, Arnold, 38.
 (*Strioturbonilla*) *stearnsii* D. & B., n. sp., Arnold, 38.
 (*Pyrgiscus*) *subcuspidata* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *tenuicula* Gould, Arnold, 38.
 (*Strioturbonilla*) *torquata* Gould, Arnold, 38.
 (*Strioturbonilla*) *torquata*, var. *stylina* Carpenter, Arnold, 38.
 (*Lancea*) *tridentata* Carpenter, Arnold, 38.
Turritella Lamarck, Arnold, 38.
 budaensis n. sp., Shattuck, 1098.
 cooperi Carpenter, Arnold, 38.
 galisteoensis n. sp., Johnson, 647.
 jewettii Carpenter, Arnold, 38.
Typha sp., Penhallow, 967.
Umbraculum (*Eosinica*) *elevatum* n. sp., Aldrich, 17.
Uncinulus mutabilis (Hall), Weller, 1291.
 nucleolatus (Hall), Weller, 1291.
 pyramidatus (Hall), Weller, 1291.
 vellicatus (Hall), Weller, 1291.
Unio æsopiformis n. sp., Whitfield, 1309.
 browni n. sp., Whitfield, 1309.
 douglassi n. sp., Stanton, 1166.
 farri n. sp., Stanton, 1166.
 nanaimoensis n. sp., Whiteaves, 1308.
 percorrugata n. sp., Whitfield, 1309.
 postbilocata n. sp., Whitfield, 1309.
 retusoides n. sp., Whitfield, 1309.
 verrucosiformis n. sp., Whitfield, 1309.
Urolophus halleri (?) Cooper, Arnold, 38.
Uronautes Cope, Williston, 1325.
Urotheca sp., Matthew, 858.
Vanikoro pulchella var., Whiteaves, 1308.
Veloritina Meek, Dall, 261.
Venerella Cossmann, Dall, 261.
Venericardia Lamarck, Arnold, 38.
Venericardia Lamarck, Dall, 261.
 section *Cardites* s. s., Dall, 261.
 section *Cyclocardia* Conrad, Dall, 261.
 (*Pteromeris*) *acaris* n. sp., Dall, 261.

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- Venericardia alticostata* Conrad, Dall, 261.
 barbarensis Stearns, Arnold, 38.
 bullia n. sp., Dall, 261.
 (*Cyclocardia*) *californica* n. sp., Dall, 261.
 carsonensis n. sp., Dall, 261.
 (*Cyclocardia*) *granulata* Say, Dall, 261.
 greggiana n. sp., Dall, 261.
 hadra n. sp., Dall, 261.
 himerta n. sp., Dall, 261.
 nasuta n. sp., Dall, 261.
 (*Pleuromeris*) *parva* Lea, Dall, 261.
 (*Pteromeris*) *perplana* Conrad, Dall, 261.
 planicosta Lamarck, Dall, 261.
 precisa n. sp., Dall, 261.
 scabricostata Guppy, Dall, 261.
 (*Pleuromeris*) *scitula* n. sp., Dall, 261.
 serricosta Hellprin, Dall, 261.
 simplex n. sp., Dall, 261.
 (*Pleuromeris*) *tellia* n. sp., Dall, 261.
 (*Pleuromeris*) *tridentata* Say, Dall, 261.
 ventricosa Gould, Arnold, 38.
 vicksburgensis n. sp., Casey, 178.
 vicksburgiana n. sp., Dall, 261.
 wilcoxensis n. sp., Dall, 261.
Venerupis Lamarck, Dall, 261.
Ventricola Roemer, Dall, 261.
Venus Linné, Arnold, 38.
Venus (Linné) Lamarck, Dall, 261.
 campechiensis Gmelin, Dall, 261.
 ducateli Conrad, Dall, 261.
 (*Chione*) *fluctifraga* Sowerby, Arnold, 38.
 (*Chione*) *gnidia* Broderip and Sowerby, Arnold, 38.
 halidona Dall, Dall, 261.
 langdoni Dall, Dall, 261.
 mercenaria var. *notata* Say, Dall, 261.
 (*Chione*) *neglecta* Sowerby, Arnold, 38.
 perlaminosa Conrad, Arnold, 38.
 plena Conrad, Dall, 261.
 (*Chione*) *simillima* Sowerby, Arnold, 38.
 (*Chione*) *succincta* Valenciennes, Arnold, 38.
 tridacnoides Lamarck, Dall, 261.
Vermipora serpuloides Hall, Weller, 1291.
Verticordia S. Wood, Arnold, 38.
 (*Trigonulina*) *bowdenensis* n. sp., Dall, 261.
 (*Trigonulina*) *cossmanni* n. sp., Dall, 261.
 dalliana n. sp., Aldrich, 16.
 (*Trigonulina*) *emmonsi* Conrad, Dall, 261.
 eocenensis Langdon (em.), Dall, 261.
 (*Haliris*) *jamaicensis* n. sp., Dall, 261.
 (*Haliris*) *mississippiensis* Dall, Dall, 261.
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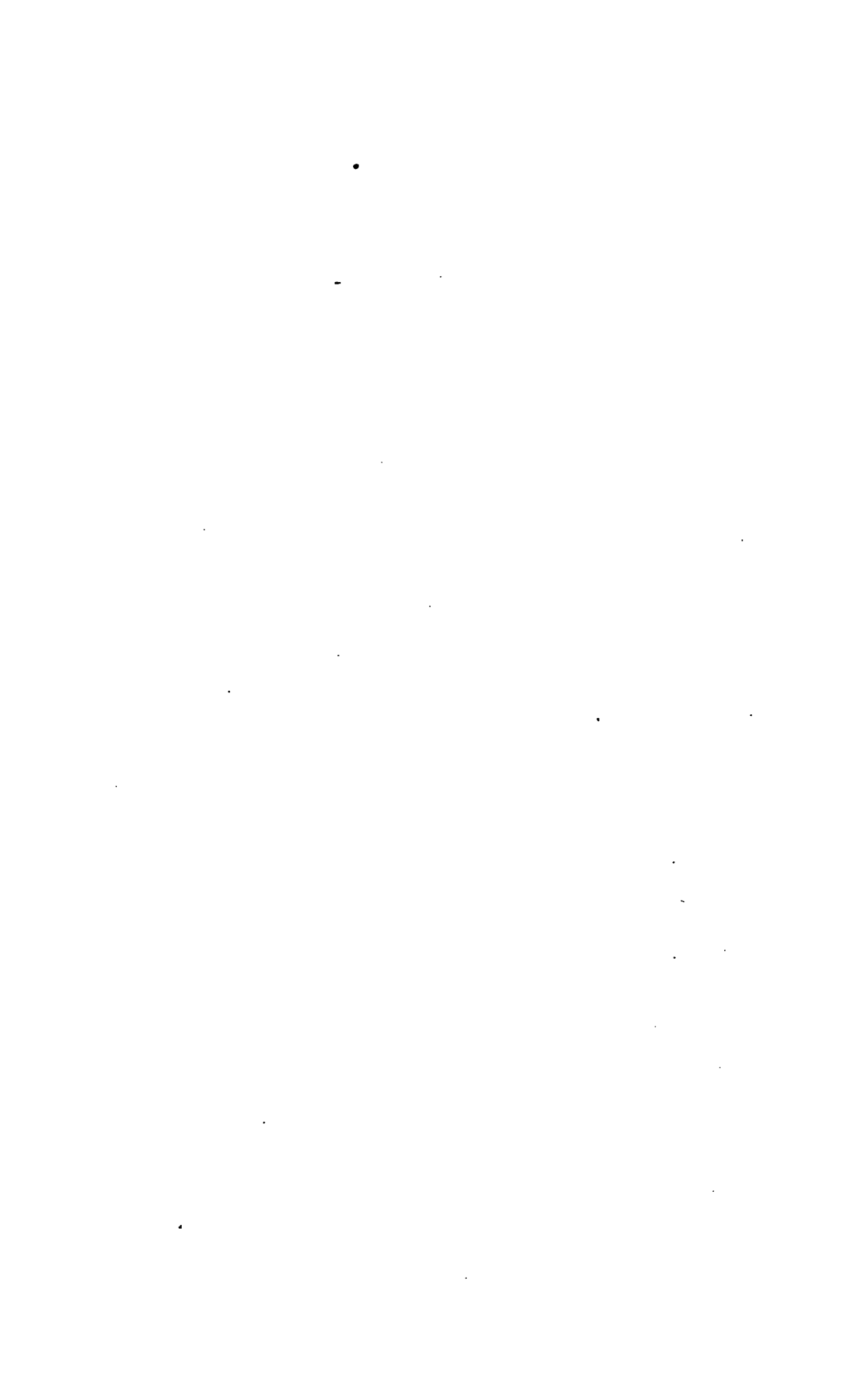
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